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ABSTRACT

This report examines the philosophy, policies, programs, methodologies, services, and organizational structures that relate to the education of students between 4 and 9 years of age. Sections of the report address: (1) the relation between development and learning; (2) school readiness; (3) early learning programs; and (4) partnerships among schools, families, and communities. Each section of the report includes a literature review, recommendations for early learning programs in the State of Maryland, and references for additional reading. Section 1 examines children's development in light of several developmental goals, lays out a mission and philosophy position, and lists the goals for early learning. Section 2 defines school readiness and makes recommendations concerning family and community responsibility for children's school readiness. Section 3 discusses the qualifications of early learning program staff; the organization, curriculum, and methodology of early learning programs; student assessment; and program accountability and improvement. The role of family partnerships with schools in promoting higher student achievement is considered in section 4. Appendices include a profile of experiences necessary for children's development through age 5; a list of benchmark outcomes for first graders; and lists of members of subcommittees of the Maryland Commission on the Early Learning Years and of committees that studied first grade outcomes. A brief executive summary is attached. (BC)

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LAYING THE FOUNDATION FOR SCHOOL SUCCESS

Recommendations for Improving Early Learning Programs in Maryland

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The Maryland Commission on the Early Learning Years

Evelyn Blose Holman, Chair

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MARYLAND COMMISSION ON THE EARLY LEARNING YEARS CHARGE OF RESPONSIBILITY FROM THE STATE SUPERINTENDENT OF SCHOOLS

The Maryland State Department of Education is continuing its comprehensive study of the educational continuum of experiences for all children by exploring the nature and character of the early learning years, ages four to nine.

We are asking the Maryland Commission on the Early Learning Years to examine the philosophy, policies, programs, methodologies, services, and organizational structures that provide direction for the education of students in the early learning years and make appropriate recommendations to me.

It will be necessary to consult both local and national scholars and practitioners and to investigate the components of instruction that make up quality programs for early learners. In addition, the commission should conduct a comprehensive review of existing Maryland policies, procedures and resources as a basis for making policy and programmatic recommendations.

The Commission should:

- Explore the nature and the development of children in the early learning years;
- Investigate educational policies and programs which provide direction for the education of students in the early learning years;
- Deliberate with the knowledge that its recommendations should address the common as well as individual needs of all learners, including students in the general population, the highly able, the handicapped, the at-risk population, and those students who speak English as a second language;
- Examine appropriate curriculum programs for early learners;
- Investigate instructional methodologies and activities that are most appropriate for early learning students ages four to nine;
- Examine the organization and structure of education for the early learning years;
- Examine the resources needed for students in the early learning years;
- Examine early learning efforts that support and involve families in the schooling process;
- Write a mission statement that reflects state-of-the-art knowledge of educational programs and pedagogy appropriate for these students; and
- Recommend areas for further study.

As time progresses, other issues may be identified; please feel free to include these issues in the scope of your work. Also, you will need to structure a process by which exemplary programs can be identified. This will permit the commission to gain firsthand knowledge about some of the outstanding programs provided for young children in the early learning years.

We know that the perspective and experience of the educators serving on the Maryland Commission on the Early Learning Years will reflect a high degree of innovative and creative thinking that will benefit Maryland's youngest students.

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I. BRIDGING DEVELOPMENT AND LEARNING: MAKING CHILDREN'S EARLY EXPERIENCES RESPONSIVE TO THEIR CHARACTERISTICS

A. DEVELOPMENT IN THE EARLY LEARNING YEARS

Children's intellectual, physical, social, and emotional development progresses through universal and predictable sequences which are characterized by individual variation and interrelatedness and lead to the achievement of four goals: a positive self-concept, social competence, mastery of basic skills, and development of intrinsic motivation. The emergence of trust, autonomy, initiative, and industry is critical to the attainment of these goals and, also, to children's future success as adults. Consequently, early learning experiences should be judged by two criteria: their appropriateness in terms of children's current developmental characteristics, and their effectiveness in helping children acquire dispositions that are conducive to their positive long-term development and learning.

1. The Universal Nature of Development

The early learning years include early and middle childhood which extend from birth through age nine. Early and middle childhood encompass three chronological periods: infancy and toddlerhood, from birth through age three; preschool, from ages three to six; and the primary period, from ages six through nine. As children progress through these three periods, their development proceeds along a number of continua, each of which reflects a particular pattern of growth. Some patterns are specific to only one or two of the domains of development: the intellectual, physical, social, and emotional. Other patterns describe the direction of development in all four domains. What is important to understand is that the patterns are universal: they are the same for all children regardless of their gender, race, culture, or socioeconomic background. The primary developmental patterns are:

Simple to complex describes all domains of development. As children mature, they entertain increasingly complicated thoughts. Similarly, they use more intricate language. The musculoskeletal, neurological, digestive, and endocrine systems all become more highly developed.

Egocentric to socialized relates to social and emotional development. At first, children comprehend experiences in terms of their relevance to themselves. With maturity they become more aware of the points of views, feelings, and needs of others and can modify their behavior to take others into account.

Partial to complete relates most closely to intellectual development. At first, children only think about one side of a story or one aspect of a situation, but not the problem or situation in its entirety. With maturity they are better able to take more than one aspect of a situation or problem into account simultaneously.

Intuitive to logical also describes intellectual development. Young children use perception as the basis for constructing their understanding of the world. Things are as they appear to be through the senses. Thus, night is only when it is dark outside and pots make eggs boil. With maturity, and increased understanding of causality, chil-

dren become more logical thinkers. They are better able to understand events in terms of their actual causes and effects.

General to specific describes all domains of development. Young children think in generalities, getting a sense of the whole but not its parts. They formulate a rule for using language and apply it in a general way. With increasing knowledge and experience, children become more aware of details, of exceptions to rules, and of the role that context plays in the display of social and emotional behavior.

Active to passivity tolerance describes brain and neurological development. Young children have boundless energy; they are, by nature, active. Not until around the end of childhood does the frontal lobe, the part of the brain that applies the brakes to children's natural energy, develop to the point that they are able to tolerate long periods of passivity.

Spontaneous to controlled/uncoordinated to coordinated relates to physical development. Children acquire rudimentary, then fundamental, locomotor and manipulative skills such as reaching, grasping, crawling, walking, and jumping. With repeated opportunities for practice and physical growth, their motor abilities are refined to a point that they are able to move their bodies, in coordinated ways, with control, ease, and efficiency.

2. The Variable Nature of Development

Development occurs as a result of the combined effects of maturation and experience and is characterized by the principle of human variation. *Each child* has an individual timing of growth that experience can only hasten up to a point. Consequently, every generalization about what *children* can do at particular ages and stages of development carries a caveat: a wide range of differences is normal and to be expected. At any given point in time, children of the same age display significant developmental differences, thus making their chronological age an unreliable indicator of their developmental maturity. Each child's growth may also be characterized by developmental unevenness. His or her level of maturity in one domain may not be consistent with development in the others; for example, (s)he may exhibit lags in the physical domain and, at the same time, verbal precocity. Then again, one domain of development may be hindered while another is maturing. These two combinations: lags, normal development, and precociousness, and regression and growth, may exist across any of the four domains of development for any individual child, only compounding the differences among children at any particular age.

3. Developmental Characteristics of Young Learners: What Young Children Can Do

Although exhibited at different points in their development, all children, when raised in adequate environments, demonstrate a range of capabilities that enable them to be successful learners. These capabilities, reflecting strengths in all domains of development are described in the chart that follows.

THE DEVELOPMENTAL CHARACTERISTICS OF YOUNG LEARNERS: WHAT YOUNG CHILDREN CAN DO

Age Range	PHYSICAL	SOCIAL	EMOTIONAL	COGNITIVE	LINGUISTIC
Birth-18 mo.	• Focus eyes on objects of interest • Reach, grasp, and release • Transfer objects from hand to hand • Sit alone, then pull themselves to a standing position • Crawl, then walk with control • Throw objects • Stack and pick things up • Scribble in spirals and loops	• Recognize significant others • Smile socially • Move away from significant others • Seek adults for help • Play alone with hands, feet, toys • Cooperate in a game like peek-a-boo • Differentiate themselves from others • Imitate others • Are aware of owning things; display possessiveness • Play along-side other children	• Express discomfort and pleasure • Show pleasure when needs are met • Develop trust • Show affection by kissing and hugging • Smile in response to social stimulation • Show fearfulness and anxiety • Push away things they don't like	• Discriminate caretakers, then other familiar faces • Explore world by looking, reaching, and grasping • Develop object permanence • Act intentionally; play with toys and express emotion to make things happen • Search for desired toy • Reason deductively	• Coo, chuckle, and gurgle • Make repetitive sounds • Imitate words and information patterns • Begin to use "I" and "me" • Pat identified picture in a book • Master most phonemes • Listen to stories with interest • Have 20-50 word vocabulary
15 mo.-4 yrs.	• Climb a jungle gym • Run without falling • Jump with two feet, balance on one • Throw overhand • Climb steps using alternative • String beads • Handle scissors • Make vertical, horizontal, and circular strokes with a crayon • May form rudimentary capital letters	• Begin to play with others • Develop gender and racial awareness • Demonstrate independence; resist help; want to do things alone • Begin to be aware of others' feelings • Are helpful • Develop imaginary playmates	• Begin to show independence • Sense of humor emerges • Demonstrate willfulness • Show pride in accomplishments • Are frequently aggressive • Begin to show fear of being alone and of the dark • Begin to develop self-control	• Matche, sort, and classy familiar objects • Begin to use problem-solving skills • Develop reasons to explain events • Rote counts • Confuse fantasy and reality • Predict, infer, and draw conclusions • Understand "today" and "tomorrow" • Disassemble and re-assemble things	• Ask "why questions • Listen to acquire information • Speak in compound sentences • Use adjectives and adverbs • Use verbal give and take • Begin to use words to express needs and feelings • Master rules of syntax • Use "big" and "bad" words with delight
3 1/2-6 yrs.	• Ride a tricycle, then a bicycle • Skip • Begin to use tools and writing implements with control • Print their name • Write using scribble and some conventional letters • Draw with greater detail • Establish handedness	• Form friendships, that are usually short in duration • Demonstrate task persistence • Share and take turns • Participate in small group activities in acceptable ways • By six, are assertive and bossy • Begin to conform	• Acquire initiative • Need to be first and to succeed; are sensitive to criticism and failure • React to feelings of others; are beginning to consider others' points of view • Develop a conscience • Are quarrelsome • Know right from wrong • Separate from caretaker without anxiety	• Count to 20 • Plan, follow through, and reflect on experiences • Prefer process over product • Recall and reflect on past events • Can move about unfamiliar territory • Order objects and events • Identify patterns • Compare and contrast • Begin to draw and write with intention to express an idea	• Are very articulate • Use language to control others and for social interaction • Begin to read books using picture and pattern clues • Recognize environmental print • Can give detailed explanations
5 1/2-9 yrs.	• Develop eye-hand coordination • Use fundamental motor skills in combination • Begin to participate in team sports • Have small muscle control • Physique begins to change	• Are industrious • Prefer own sex for play • Participate in group games • Form a peer group; peer group status is important • Are conscientious--accept responsibility • Do things to evoke praise and recognition	• Become a perfectionist • Worry about things • Are selfish • Display empathy and sympathy • Are self-absorbed; display industriousness • Display impulsive enthusiasm	• Display effort • Begin to understand causality • Are achievement-oriented • Logical abstract thinking emerges • Tell time • Know a great deal about the world • Are interested in conclusions and final products	• Use oral language for a wide variety of purposes • Read for a variety of purposes • Write for a variety of purposes • Listen attentively

4. The Interrelatedness of Developmental Domains

The intellectual, physical, social, and emotional domains of development are not independent of one another; rather, they are interrelated. To some extent, development in one area limits or facilitates what children can do in other areas. For example, making the transition from parallel to associative play, which is an important aspect of socioemotional development, also promotes intellectual development because learning is primarily a social activity. At the same time, intellectual development may impose limitations on children's ability to interact appropriately with their peers. Children who are not yet able to consider the perspectives of others may have difficulty taking turns or following simple rules.

Similarly, physical development significantly impacts on social, emotional, and intellectual development. Proficiency in movement influences the extent to which children are able to learn by exploring the environment and manipulating objects in it. Eye-hand coordination affects the ability to write; visual acuity affects the ability to read. Motor proficiency contributes to the development of self-concept which, in turn, facilitates or impairs children's social competence.

5. The Relationship Between the Acquisition of Dispositions and the Attainment of Developmental Goals

During early and middle childhood, according to developmental theorists, children need to achieve four major goals: the development of a positive self-concept; social competence; mastery of culture's basic symbol systems, such as reading, writing, and mathematics; and the development of an interest in learning, or intrinsic motivation. Children who attain these milestones by the time they exit the early learning years have a greater likelihood of continuing to develop in the normal manner. Conversely, children who fail to achieve these goals, at a satisfactory level, may struggle through subsequent periods of development and growth. Erikson believed that each period or stage of human development is critical for the acquisition of a particular disposition which facilitates learning and, in turn, promotes the attainment of developmental goals. The dispositions most pertinent to early and middle childhood are trust, autonomy, initiative, and industry. Trust or its antithesis, mistrust, is acquired during infancy; it is the precursor of learning through exploration of the environment and of social competence. Autonomy or its opposite, self-doubt, is pre-requisite to the development of an interest in learning and to self-esteem. Around age three or four, children acquire initiative, from which effort and persistence emerge. If children's world doesn't permit practicing developing skills, they acquire a sense of failure, rather than initiative. A sense of industry develops from about six years of age until puberty. Industriousness enables children to master basic skills; without it, and the concomitant school success it facilitates, children exit middle childhood feeling inferior to their peers.

6. Implications of Development for Early Learning

Development has two dimensions: the normative and dynamic, both of which should serve as the basis for establishing criteria against which children's initial learning experiences are judged. The normative dimension addresses what children can or cannot do at a given age or stage. The dynamic dimension concerns the impact early experiences have on later functioning, particularly with respect to personal/emotional development. It also focuses on the long-term cumulative effects of children's repeated experiences. An expe-

rience such as failure, that might not affect children's development if it is infrequent, may be harmful if it occurs often over a long period of time.

When considering children's early experiences in terms of the normative dimensions of their development, the concept of developmental appropriateness applies. According to the National Association for the Education of Young Children, developmentally appropriate experiences are those which are compatible with children's physical, social, emotional, and intellectual characteristics at any age or stage. They are suitable for each child in light of his or her unique pattern of development, interests, background of experiences, and family/cultural background. In addition, they promote children's growth across all developmental domains.

The dynamic dimension of development requires that children's early experiences be assessed in terms of their potential long-term effects. The dispositions that are critical for children to acquire in early and middle childhood significantly impact on the way they will respond to experience through old age. They are important not only to children's immediate development but, also, to their success as adults, as well. Self-directedness, interest, independence, industry, resourcefulness, and cooperation are the "basics" children will need to become responsible productive citizens in the 21st century. Still, as Katz points out in her article, "Engaging Children's Minds: The Implications of Research for Early Childhood Education", dispositions are often the most neglected aspects of children's early learning experiences.

In sum, insights derived from developmental theory and from research suggest that children's early learning experiences should be judged by two essential criteria. The first is their developmental appropriateness. The second is their cumulative long-term effects.

7. To Read More About Development and Its Implications for Early Learners Refer to the Following Sources

Association for Supervision and Curriculum Development. *Developmental Characteristics of Children and Youth.* Washington, DC: Association for Supervision and Curriculum Development, 1975.

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B. MISSION AND PHILOSOPHY FOR THE EARLY LEARNING YEARS

MISSION

The mission for school in the early learning years is to provide young children from diverse backgrounds with educational experiences that foster their disposition to learn and promote their competencies in all developmental areas and content area domains. These educational experiences are the foundation of self-confidence, academic success, responsibility and rewarding group membership in subsequent years of the learning continuum. In order to realize its mission, the school must first believe that all children can learn and then act on its belief by providing developmentally appropriate programs in which all children have equitable opportunities to become competent individuals with positive self-concepts and high self-esteem.

Insofar as the early grades influence children's lifelong attitudes toward themselves, learning, and others, the school must do all that it can to ensure that their first experiences are positive and promote their success. It must use curricular, organizational, and methodological strategies and assessment practices that are sensitive to children's ethnic and cultural backgrounds, appropriate in terms of their stages of development, and tailored to their needs and capabilities as unique individuals. It must attend to the whole child and develop the skills children have already begun to acquire as thinkers, inventors, communicators, and problem solvers. The school must help children learn how to apply knowledge and skills, in thoughtful ways, in order to cope with the world around them.

The school must form a partnership with the home and community. It must initiate and sustain communication with children's parents/guardians and cooperate with them in promoting their children's development and educational success. It must link with both the home and community in meeting the needs, safeguarding the rights, and protecting the welfare of all the young children it serves.

PHILOSOPHY

We believe that . . .

- a child's development is a dynamic growth process in which predictable stages of maturity unfold in unique, often uneven, patterns or rhythms.
- all young children are active and spontaneous, creative and curious, and capable of self-direction.
- the beliefs children hold about themselves are powerful determinants of what they become.
- each child is a unique individual with his/her own culture, history, personality, learning style, strengths, interests, and needs, all of which must be considered in planning his or her education.
- the school in the early learning years should be organized as a bloc in which essential learning objectives span grade levels and educational outcomes are clearly articulated for the bloc as a whole.
- because children differ developmentally, each child should to begin to learn where (s)he is and progress at his or her own rate.

- because children learn holistically, drawing parallels and relationships between knowledge of different subjects, the content areas should be presented using an integrated approach.
- learning should be mediated through a social process and promoted through children's active engagement with a wide variety of concrete and print materials and technology.
- the environment should transmit a positive view of cultural diversity, reflect children's diverse accomplishments, and enable children to learn through individual and cooperative activities.
- the teacher should establish a climate of inquiry within an environment that is challenging as well as warm, nurturing, predictable, and free of anxiety.
- assessment, rather than testing, should be the focus of evaluation in the early learning years.
- the school should use a variety of assessment methods that are performance-based and include systematic and on-going observation of children's performance.
- prekindergarten through second grade children should have teachers who are certificated in early childhood education. Third and fourth graders should have teachers who have had appropriate coursework or experience in child development and/or early childhood education.
- the school should make parents aware of their right and responsibility to be involved in their child's education.
- home/school cooperation must be based on a recognition of and respect for the role that families play in children's learning.
- school, community, businesses, and public and private agencies and institutions should share responsibility with families for helping children, ages 0-5, prepare for first grade.
- the school, community, businesses, and other public and private agencies and institutions should share responsibility for providing comprehensive services to children, ages 4-9, and their families, in order to ensure children's educational success.

C. EARLY LEARNING PROGRAM GOALS

The prekindergarten through fourth grade program should:

- foster a positive self-concept that includes self-knowledge and pride, knowledge of and pride in the groups to which children belong, and high self-esteem that emanates from having a sense of personal effectiveness,
- sustain children's natural curiosity and interest in learning and help them acquire ways of thinking and feeling that lead to successful learning (trust, initiative, autonomy, persistence, effort, self-control, and cooperation),
- help 4-6 year olds become acquainted with, and promote 7-9 year olds' acquisition of knowledge, skills, and processes in reading, writing, language usage, and speaking; mathematics, science, technology, social studies, the fine arts (music, art, theater, and dance), and physical movement,
- enable children to thoughtfully apply knowledge, skills, and processes to real-world contexts,
- help children learn how to use critical and creative thinking as the basis for solving problems or making decisions of personal relevance, and
- promote children's skill in initiating, developing, and maintaining interactions, relationships, and friendships with others, especially peers.

II. HOME, SCHOOL, AND COMMUNITY:
HELPING CHILDREN GET READY FOR FIRST GRADE

A. DEFINING SCHOOL READINESS

School readiness is the outcome of the sum of children's experiences prior to first grade. All persons, agencies, and institutions with whom 0-6 year old children interact should be held accountable for enhancing their development, thus contributing to their preparedness for school.

1. Perspective

Children who start first grade ready to learn have the best chance of meeting with success. Awareness of the relationship between a child's readiness for school and his or her performance in school prompted President Bush to make school readiness one of six major goals for the nation's schools, a position supported by all fifty state governors. The President's goal was endorsed by the Maryland State Board of Education in its policy outline, *Schools for Success.* According to *Schools for Success,* by the year 2000, 95 percent of Maryland's children will start first grade ready to learn.

In theory, most children are born "ready to learn". An inherent curiosity drives them to spend the first five years of life constructing an extensive repertoire of knowledge about the world, themselves, and others. How does this disposition to learn, a hallmark of early childhood, differ from the concept of being "ready to learn", a hallmark of middle childhood? From the perspective of education, "ready to learn" means being prepared to assume the role of student and to meet and benefit from the demands of formal schooling. Around age six, readiness to learn coalesces with the disposition to learn, enabling children to make the rite of passage from the small, personalized settings of family and child care or preschool to the larger arena of formal school where they will be judged by objective standards of performance.

The extent to which children are ready for formal schooling is determined by the interaction of three factors: maturation, prior experiences, and the school's first grade expectations. The latter two factors are within adults' capacity to control and are the most significant variables to be considered in deliberations on school readiness. In this sense, school readiness means that children and the first grade program should be mutually prepared for each other.

Any definition of school readiness must acknowledge its bi-directional nature. On one hand, children should possess a cluster of characteristics and attributes that enable them to cope with first grade's challenges. On the other hand, first grade programs should be compatible with children's developmental capabilities and learning styles. Schools must also accept and respond to different levels of readiness among children, because it is normal for readiness, like development, to vary along a continuum.

Being prepared to assume the role of student does not mean acquiring a specific body of "academic" knowledge and skills. Readiness cannot be taught and tested; nor does it constitute a set of entry requirements for school. Rather, it is a holistic concept encompassing physical, social, emotional, and intellectual dimensions of development. It is a cumulative concept, the outcome of the sum of children's experiences prior to first grade. The overall conditions in which children are nurtured and socialized influences their readiness for school. The process of ensuring that children start first grade ready to learn begins with their conception.

While the focus of school readiness is on the child, and the cluster of characteristics (s)he does or does not display, the onus for school readiness lies with the home, community, and school. Families are responsible for ensuring that children have experiences that promote their disposition to learn, thereby enhancing their preparedness for school. However, families are not exclusively responsible. In raising their children, they depend on and are impacted by a broad spectrum of outside experts, institutions, and technology, such as health, child care, and preschool providers, employers, the neighborhood, and the media. These experts and institutions share responsibility in fostering children's readiness for school.

Kindergarten should be viewed as the final year of informal preparation for formal school. Consequently, the academic curriculum of first grade that focuses on reading, writing, and mathematics is not appropriate for kindergarten. If being ready to learn encompasses all aspects of development, then programs for five-year-olds are responsible for providing a balance of experiences that promote all aspects of development. Kindergarten should not only expand children's knowledge of the social and physical worlds and introduce them to the culture of literacy, but, also, build their independence, self-reliance, and self-confidence and help them acquire a positive view of themselves, life, and learning.

Getting children ready for school is a shared responsibility that is best realized at the community level. As an integral part of the community, the school should serve as a locus of advocacy by spearheading action on behalf of children. Together with parents and representatives from all elements of the community, including public and private agencies, churches, governmental bodies, and business and industry, the school should identify what it has, wants and needs for its families and children; what it requires to meet its goals; and who can help it attain them. Community action should follow from an understanding of children's universal rights and needs. Regardless of geographic location, race, culture, gender, physical attributes, or socioeconomic background, all children need the same fundamental experiences to start first grade "ready to learn."

2. Recommendations

1. The Maryland State Department of Education should collaborate with representatives from the health and medical, child care/education, business, and human resources communities and the Maryland Congress of Parents and Teachers to identify the scope of each agency, institution, or provider's responsibility and accountability in regard to preparing children for school.

3. To Read More About School Readiness Refer to the Following Sources

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B. HOLDING FAMILIES RESPONSIBLE: EXPERIENTIAL DIMENSIONS OF SCHOOL READINESS

Families are responsible for ensuring that young children have experiences that promote all aspects of their development, thus preparing them for first grade. In order to assume that responsibility, families must know what experiences children need and have the motivation and means to provide them.

1. Perspective

Burton White characterized the family as the first and foremost educational delivery system. Given the changing structure of families, and the fact that many children spend a significant portion of the day outside their homes, today's family is no longer just parents and their children, but the total cadre of significant others with whom a child interacts. This may be grandparents, neighbors, aunts and uncles, brothers and sisters, or persons who provide education and care. A growing body of evidence suggests that this family, whatever its composition, influences a child's readiness for school through the experiences it does or does not provide.

In a multi-nation study conducted by the University of Michigan, Harold W. Stevenson and colleagues in the Department of Psychology found that on tests given four months after entrance to school, U.S. first graders were already trailing Japanese and Chinese children. The reason for the differences in performance, the researchers suggested, is that American families do not emphasize children's acquisition of school-related skills and dispositions from an early age. They tend to overlook the importance of home experiences in children's eventual school success. "Our problem," Dr. Stevenson said, "lies not only in American schools, but in American homes [as well]."

According to Heather Weiss, efforts to understand the relationship between children's home experiences and initial school performance have become more refined. Early interest was spurred by the Coleman Report which suggested that family variables account for more of the variation in school achievement than do school-related measures. While Coleman only examined families' socioeconomic status, a second generation of researchers made efforts to ascertain what features of the home environment enhance or diminish learning. They found that variables such as language stimulation and the availability of books were positively correlated with children's initial school achievement, independent of socioeconomic status. On the basis of this research, they concluded that family income is not a good predictor of school achievement on an individual basis.

Since the mid-eighties, third generation research has investigated how the attitudes, values, and childrearing styles of the significant adults in children's lives affect their school performance. A synthesis of the findings indicates that a certain cluster of parental attitudes and family processes, and home or child care experiences consistently contributes to first grade success. Although it is not clear whether any one of the variables is more important than the others, the accumulated evidence documents the significant role families play in promoting children's readiness for school. It shows that if families provide children with a rich va-

riety of experiences from birth, and ensure that the experiences others provide are of high quality, then chances are that children will start first grade ready to learn.

The experiences children need in order to acquire the knowledge, skills, attitudes, and dispositions they will need for school can be provided by most families. First, families must know what type of experiences are necessary for school success. Second, they must have the motivation to provide them or seek help from outside providers. If Americans are ideologically committed to the primacy of the family, and hold them responsible for the development of their young, then educating families so that they are better able to prepare their children for school will be considered a critical function of every agency, institution, and social system with which families interact.

2. Family Experiences That Promote School Readiness

a. *Health*

Experience	*Indicators*	*Outcome: The Child*
Receives on-going health care that includes prevention as well as treatment.	*MOTHER* • Received prenatal care starting in the first trimester of pregnancy. • Refrained from using drugs, alcohol, or tobacco during pregnancy. • Knows and/or learns how to care for his or her child. • If employed, has health benefits that provide comprehensive coverage for child. • Knows how to access and when to use health/medical services, if needed. • Can obtain transportation to and from health and medical services. *CHILD* • Has had all required immunizations. • Periodic health care includes screening, diagnosis, and treatment of problems. • Has received a growth and developmental assessment. • Receives dental check-ups on a regularly scheduled basis and treatment of problems. • Has received vision and hearing screening and treatment of problems. • Receives continuity of medical care when ill.	Is healthy.

Early childhood is a period of rapid physical, social, intellectual, and emotional development. It is also a time when children are most vulnerable to biological handicaps and diseases. Health and medical problems jeopardize development. The best way to safeguard development, therefore, is to prevent health and medical problems from occurring. Healthy children enter the world free from addiction and disabilities and grow through the first five years of life without contracting preventable diseases or suffering from untreated health problems. In order to grow up healthy, children need three basic forms of medical attention: early and comprehensive prenatal care, preventive pediatric care, and timely treatment of childhood illnesses through the period of full recovery.

Prenatal care in the first trimester of pregnancy is critical to the health of the developing fetus. Women who do not receive such care are three to six times more likely to have premature, low birthweight babies than women who do. Low birthweight is the single greatest threat to the well being of infants born in the United States today. Low birthweight babies run a high risk of being born with a congenital anomaly or neurodevelopmental handicap, both the forerunners of learning disorders and psychosocial problems.

All children need to be protected from childhood diseases. Immunization against polio, diphtheria, measles, mumps, tetanus, and pertussis is critical. Periodic screening for dental and health problems is also essential. Hearing, vision, central nervous disorders, and lead poisoning are fairly prevalent among today's preschool-aged population, although all may be detected and treated so as not to threaten development. Left undiagnosed and untreated, they limit language, intellectual, motor, and social development, and contribute to low self-esteem.

Getting sick is part of growing up, but illness limits children's interest in learning and separates them from the environment which is a critical source of learning. When children are ill they need timely medical attention that provides for continuity of care through the period of recovery. Without such treatment, an illness may worsen, become chronic, or re-occur. Children who suffer from chronic or recurring illnesses are less likely than healthy children to develop in ways that prepare them for school. Michael Rutter, who has done much of the landmark research on the relationship between early experiences and later outcomes, found that children who are hospitalized two or more times during early childhood have markedly increased rates of psychosocial problems.

A large and expanding body of research clearly links maternal health status to age, race, and economic background, and child health status to the economic background of the family. An expectant mother who is poor, under the age of 19, and Hispanic or African-American is significantly less likely than her non-poor, older, or Caucasian counterpart to receive prenatal care in the first trimester of pregnancy. She is significantly more likely to bear a low birthweight baby. Poor children living in urban areas receive fewer vaccinations, even though crowded housing increases the risk of contagion. They are significantly more likely than their non-poor counterparts to have untreated health problems and to suffer from a myriad of childhood illnesses. When illness does occur, it is more severe. Poor children are 75 percent more likely than non-poor children to be hospitalized in any given year.

The relationship between economic status and being at risk for health and medical problems is both direct and indirect. The primary factor behind parents neglecting their children's health needs is lack of financial resources. Beyond financial factors, the most common cause is lack of information. Poor parents tend to be poorly educated. They often do not know how to care for themselves or their babies during pregnancy. Once their babies are born they do not know how to monitor and identify their health needs or access and use the health system to promote their children's well-being.

b. ***Safe, Stable Environment***

Experience	*Indicators*	*Outcome: The Child*
Lives in a safe, stable environment.	*CHILD* • Has a permanent home. • Home is clean, heated, well-lighted, and free from environmental hazards. • Home is located in a community with minimal crime, violence, and drugs. • Is always under adult supervision. • Typical day consists of familiar routines carried out on a relatively predictable schedule. *FAMILY* • Family members are free from drug/alcohol addiction, mental illness, and unmanageable stress. • Distress and discord are resolved without resorting to violence, abuse, or abandonment. • Family has a support system consisting of friends, relatives, or neighbors.	Is secure, and free from environmental hazards and environmentally-induced stress.

During early childhood children construct basic views about the world and the people in it. These views promote or diminish their inclination to learn. In order to believe that the world is a good place to know and be, children must live in an environment where relative harmony prevails. In order to believe that the world is predictable and can be known, they must live in an environment characterized by order and regularity. Children who do not conceive of the world as a predictable and rewarding place, lose interest in exploring it and in trying to figure it out.

For children to grow up free from unreasonable stress and anxiety about the world in which they live they must be raised in environments that are coherent, stable, and safe. Young children are unable to cope with a "pillar to post" existence; they need a "permanent" place to call home. Home should offer protection from danger to life and limb, have adequate sanitation, heat, and ventilation, and be structurally sound. It should be located in a community with minimal violence and crime. At home and elsewhere, children should be under constant supervision. Accidents by definition are avoidable, yet they kill or injure more children than anything else.

A child's home should also offer protection from psychological threats. Because young children are unable to handle constant change, they need daily routines carried out on a predictable basis. Because they are unable to cope with or understand persistent conflict, they need a home life in which family members relate to each other, in positive, encouraging ways. In families where chaos, marital discord, and spouse abuse are the backdrops of life, children become confused, depressed, and frightened, and withdraw into themselves.

Poor children and children who live in single-parent families are at greatest risk for having no home or living in unsafe and unsanitary conditions. The fastest growing segment of the homeless population is families with children under the age of six. Among families with young children who can find a place to live, sky-rocketing rents often force them to live in conditions that pose endless dangers to children.

Children who grow up in families with scarce economic resources or who are raised by immature, mentally ill, and/or drug or alcohol addicted parents, or parents with poor coping skills are most likely to experience a life characterized by chaos and incoherence. Their lives have little chance of being altered if their parents are also isolated from supportive family members, neighbors, or friends. A helping hand, a friendly face, and an attentive ear all can make a difference to parents who feel overwhelmed or alone. In families where timely intervention is not offered, children's exposure to enduring chaos and discord ultimately impairs their development.

c. *Food, Rest, and Clothing*

Experience	*Indicators*	*Outcome: The Child*
Has adequate rest, nourishment, and clothing.	*CHILD* • Eats at regular times each day so (s)he is well-nourished. • Eats a variety of foods from all food groups. • Gets eight or more hours of sleep a night. • Daily routine includes time for naps or rest. • Clothing is appropriate for the indoor climate and outdoor weather conditions.	Is alert and energetic.

Food, rest, and clothing are prerequisite to learning in the first five years of life. Well-nourished children have access to food when they are hungry, satisfying the daily nutritional requirements for their level. Well-rested children receive sufficient sleep relative to their needs, and their daily routines balance quiet and active periods. Adequately clothed children are neither hot nor cold. Moreover, the type of clothing they wear provides freedom of movement and freedom to engage in messy, exploratory play.

There are five forms of malnourishment. Starving children do not get enough of anything to eat. The caloric intake of undernourished and overnourished children is below or above their energy needs. Children with nutritional imbalances eat food that is deficient in the vitamins and minerals necessary for healthy growth or excessively high in fat, saturated fat, sodium, sugar, or cholesterol.

According to Johanna Dwyer, Professor of Medicine at Tufts University, malnourishment, like inadequate rest and clothing, affects children of all socioeconomic backgrounds. Neglected children are often starving as are the fetuses of women who use cocaine or smoke during pregnancy. Poor children are more likely than children from more affluent homes to be undernourished and inadequately clothed, and to have nutritional deficiencies. Children of all social classes suffer from a rising prevalence of overnutrition, obesity, and nutritional excesses.

Severe undernourishment profoundly limits intellectual development, particularly in the prenatal period and first two years of life. Mild to moderate malnutrition, inadequate rest, and inappropriate clothing do not cause permanent developmental damage, but indirectly affect development by reducing children's inclination to learn. Tired and hungry children, and/or those who are inadequately clothed, exhibit apathy, social withdrawal, a lack of curiosity and persistence, and, attentional deficits.

Problems related to the adequate provision of food, rest, and clothing for preschool children are caused by both familial and environmental factors. Parents may lack financial resources or skill in managing food, money, clothing, or children's daily schedules. They may lack general or age-specific childrearing information, or the ability or motivation to carry out measures that promote their children's welfare. They may have inadequate provisions for child care. Preschool and child care providers, with whom children spend a significant portion of their time, may lack the knowledge or resources needed to ensure that receive adequate food, rest and clothing.

d. ***Love and Affection***

Experience	*Indicators*	*Outcome: The Child*
Receives consistent love, affection, and care from a limited number of responsive adults.	*CHILD* • Has a "permanent" family. • If parent(s) is working, has a stable arrangement for care. • Has the opportunity to form a secure attachment to at least one adult who is attuned to him or her and meets his or her physical and emotional needs and need for age-appropriate stimulation on a continuing and dependable basis. *CHILD CARE PROVIDER* • Knows how to provide age-appropriate care. • Family day care home is registered. • Child care facility is licensed and meets quality criteria as determined by the National Association for the Education of Young Children. • Adult-child ratios in family day care homes and facilities are low, enabling the caretaker to be attentive and responsive to child's needs. *PARENT/CARETAKER* • Is warm and affectionate: provides comfort, love, and cuddling. • Is observant and patient: responds appropriately to child's cues and quickly to child's distress. • Is physically and emotionally available; interacts frequently with child on a one-to-one basis.	Trusts adults; has a positive attitude toward adult authority and is amenable to adult guidance and direction.

A loving, predictable relationship between an infant and its mother and one or two other nurturing, sensitive adults will, over time, develop the child's sense of trust. According to child development experts, acquiring the ability to trust is the most critical variable in normal human development. It fosters in children a special receptivity to being socialized, initially, by their primary caretakers, and later on, by other adults, such as teachers.

Toddlers who have forged strong connections with caring adults are able to explore the environment secure in the knowledge that they will not be abandoned. Children who trust adults are amenable to their guidance and direction. Not wanting to jeopardize valued relationships, they conform to adult expectations. Moreover, they have a positive attitude toward adults' authority. Children who associate adults with need gratification and enjoyment trust that their demands and requests will lead to favorable outcomes.

The development of attachment evolves gradually in the first year of life as infants experience warm give-and-take interactions with a limited number of caretakers. Baby and each caretaker, interacting on a one-to-one basis, influence and regulate each other. The result is a "goodness of fit" in

which the infant seeks the caretaker's attention by smiling, crying, and initiating eye contact, and the caretaker responds to the infant's cues by offering comfort or pleasure.

Research shows that there are three mother or caretaker-related variables that have a significant impact on children's development of security, attachment, and trust. The first variable concerns the amount of care given specifically by the mother. Securely-attached children have mothers who did not leave them in the care of others for long periods of time during infancy. The second variable is the total amount of care received from all significant others. Caretaker availability is prerequisite to caretaker responsiveness. Mothers or caretakers who are consistently unavailable to infants, either physically or emotionally, give them too little attention to be perceptive of their unique ways of expressing needs, wishes, and preferences. They thus diminish infants' ability to form a secure attachment with them.

While physical and psychological availability are necessary conditions for adult responsiveness, they do not guarantee that primary caretakers will interact with infants or respond to them in sensitive ways. Research conducted by Werner, Ainsworth, Harlow, and others, suggests that the kind of care provided by mother and caretakers plays a major role in determining whether attachment behavior develops. In order for a strong, mother-child, or caretaker-child bond to be formed, mothers or caretakers must:

- know the infant well enough to be attuned to his or her states, moods, and signals,
- respond promptly and appropriately to the infant's cues,
- respond to the infant at his or her timing, not their own,
- derive pleasure from interacting with the infant, and
- satisfactorily meet the infant's needs.

Developing a secure connection with one or two caring adults during infancy is the precursor of the later capacity to follow rules, take directions, establish positive rewarding social relationships, and love. The infant's lack of opportunities to form secure, trusting relationships lead to the development of a deviant personality profile. When consistently deprived of responsive human interactions, babies ultimately conclude that adults cannot be relied upon for affection, concern, or support.

Any number of factors within the home or child care setting can threaten the formation of attachments. Infants fail to thrive when their parents do not know how to provide care or are not able or willing because of emotional impairments or preoccupation with other activities or concerns. Mothers who are slow to respond to their infants, lack warmth, or are unskillful in handling their babies, raise babies who are indifferent to the requests and needs of others.

Substandard child care undermines infants' ability to strong, secure relationships. When adult-child ratios and caretaker turnover are high, individualized, sensitive attention from a familiar adult cannot be counted on. When children have to cope with a large or constantly changing cast of caretakers, are continuously shuffled from one foster home to another, or spend a major portion of their first two years of life in institutions or hospitals, they are unlikely to form the warm and loving relationships that are critical to normal development.

Albert Trieschman once wrote that the most important observation parents make is when they notice that they have become a glimmer in their child's eyes and the child a glimmer in theirs. A growing body of research in psychology and sociobiology has demonstrated that attachment is a powerful need in humans and must be formed beginning at birth. Without love, affection, and attention, children rarely develop the sense of security needed to become curious, self-directed, and empathetic.

e. ***Positive Self-Concept***

Experience	*Indicators*	*Outcome: The Child*
Receives positive verbal and non-verbal information about him or herself, family, and race or culture.	*PARENT/CARETAKER* • Provides frequent opportunities for and encourages child to express his or her likes, dislikes, points of view, and feelings and pursue personal preferences and interests. • Responds to child's curiosity about his or her anatomy and physical features with accurate, age-appropriate information. • Refrains from imposing gender stereotypes that limit child's potential and development. • Using words and gestures, expresses pride in child's strengths, capabilities, and accomplishments. • Helps child acquire personal information about self, family, and own culture. • Provides opportunities for child to learn about the values, rituals, standards, and language of mainstream culture. *PARENT(S)* • Is sufficiently in control of own life to accept the child as (s)he is at each stage of development. • Spends time with child. Involves child in enjoyable experiences with family members and in the celebration of family/cultural traditions. *CARETAKER* • Knows child's cultural background and uses such knowledge to plan experiences and when purchasing toys, books, and other materials. • Treats child and his or her family with respect and dignity. Refrains from judging child or providing differential (discriminatory) treatment on the basis of his or her family or cultural background, gender, or physical abilities.	Has a positive self-concept that includes some information about self, family, and culture.

While a strong initial attachment to a primary caregiver is a key ingredient in the healthy development of babies, for successful development to continue, the growing child must learn to separate from the primary caregiver. This process of separation from caregiver and attachment to other adults, then to peers, takes place gradually as the child develops an identity. Without acquiring a sense of self that includes positive self-esteem, children lack the security and confidence needed to make the rite of passage from the world of home and family to that of school and peers.

Children's self-concept depends upon their establishing a sense of identity, connectedness, and control. They must find out what they are, to whom they belong, and what they can do. Children begin to construct their self-concepts around six months of age when they become aware that they and their caretakers are distinct individuals. From six months through three years of age they establish a basic orientation toward themselves; this orientation significantly influences their subsequent development. Not only do they begin to know who they are, to whom they belong, and what

they can do, they also judge themselves in respect to each of those areas. Thereafter, through the age of six, they are absorbed in finding out which aspects of their identity are constant and which can be changed. Learning to accept those self-attributes that cannot be changed is important to children's emotional stability.

Self-concept development engages young children in a comparison of the ways they are similar to and different from others relative to issues of family and physical abilities and attributes, such as body parts and skin color. Five year olds possess very definite, if rudimentary, views about gender and gender roles; family, how it lives and what it has; and race. According to Louise Derman-Sparks, expert in the social-political contexts of human development, by age five, children have already assigned value to themselves and others based on their own and others' appearance, abilities, gender, race, family, and possessions.

Children's experiences with their body and with significant others largely determines what they know about themselves and how they evaluate the attributes that constitute "self". Parents and caretakers should involve children in a wide variety of experiences that enable them to acquire positive, accurate information about themselves, including their physical abilities and attributes, family, and culture. They should promote children's individuality by encouraging them to express their likes, dislikes, and points of view, and pursue personal preferences and interests.

Parents and caretakers should protect children from developing misconceptions about themselves and others. They should talk openly with children about their anatomy, rather than ignore their curiosity about their own and others' physical characteristics. They should encourage children to go beyond stereotypic gender role constraints and try out new behaviors, rather than teach children to conform to gender-specific norms. Parents and caretakers should promote children's appreciation of human diversity and express intolerance of discriminatory behavior. While protecting children from prejudice, they should provide opportunities for them to participate in mainstream culture.

Three categories of children are at risk for not developing a knowledgeable and positive self-concept. The first group lacks information about who they are and what they can do; their natural curiosity about their bodies, its functions, and capabilities is discouraged. The second group lacks information about the groups to which they belong; they are denied the sense of connectedness that comes from enjoyable experiences with family and others with whom they identify. The third group includes children who are unable to develop self-pride; they grow up in environments that send negative messages about their gender, family, race, culture, appearance, or abilities.

Parents and caretakers may fail to help children develop a knowledgeable, positive self-concept for many reasons. They may not be sufficiently in control of their own lives to accept the child as (s)he is and express pride in the child's accomplishments. They may lack the time and energy to spend with the child or to respond to his or her abundant curiosity. Parents and caretakers may also be unaware of the effects of their behavior on the child's emerging concept of self. They may not realize that negativism, stereotypes, and biases undercut children's full development and damage their self-esteem.

f. *Motor and Perceptual-Motor Development*

Experience	*Indicators*	*Outcome: The Child*
Has daily opportunities to use large and small muscles.	*ENVIRONMENT* • Includes safe outdoor space where child can run, jump, climb, swing, use balls, and ride wheeled-toys. • Includes a wide variety of age-appropriate toys to touch, manipulate, and explore. *PARENT/CARETAKER* • Ensures that rigorous physical activity, preferably out-of-doors, is part of child's daily routine. • Provides time for child to play with toys that promote his or her fine motor abilities. • Allows and encourages child to test his or her motor, balance, agility, dexterity, and coordination skills and offers support as needed.	Has the motor abilities required to accomplish age-appropriate tasks.

Learning to move is fundamental to learning in the preschool years. Movement serves an information-gathering function, enabling children to explore and acquire knowledge about themselves, the world, and others. It also enables them to integrate and organize the information they gather. Children who start first grade with a relatively mature level of bodily control and perceptual skill are able to focus on learning, instead of having to learn the motor competencies on which learning is based. In contrast, children who start school lacking in motor, perceptual-motor, or coordination skills are impaired in their ability to learn.

Psychomotor development involves the acquisition of motor abilities in three areas: movement, such as being able to walk, balance, turn, stop, and manipulate objects; fitness, such as being able to move or manipulate objects with agility, dexterity, and coordination; and perceptual-motor skill, including visual and auditory discrimination and spatial and temporal awareness. Children begin to acquire competency in all three areas shortly after birth. Through age six, they refine their skills to the point where they are fluid and adaptable to a variety of situations.

Children's ability to function motorically will not increase through maturation alone. Motor development depends on the frequency and nature of children's movement experiences. They need time, a safe place, and daily opportunities to use their large and small muscles. They need to play with toys and other materials and equipment that require a motoric response. Above all, children need parents and caretakers who provide encouragement and offer them support and guidance in exploring their physical capabilities. Adults who expect young children to emulate adult movement patterns or develop specialized motor skills too soon, may discourage their interest in physical activity and lower their self-esteem.

The factors that place children at risk for having deficiencies in motor development can be addressed through information. Children develop through active play, not passive activity. Gender biases jeopardize boys' development in the area of motor fitness and girls' development in the area of fundamental movement. Since boys are often encouraged to run outside and play with balls and bikes, they are more apt to develop risk-taking skills and a positive attitude toward challenge. Since girls are often given manipulative toys with which to play, they are more apt to develop manual

dexterity and eye-hand coordination. In order to acquire a readiness for school, children of both sexes need balanced psychomotor experiences. Readiness to learn depends upon acquiring both motor skills and positive attitudes toward challenge and risk-taking.

g. ***Knowledge Acquisition/Development of Thinking***

Experience	*Indicators*	*Outcome: The Child*
Has daily opportunities to play with objects, others, and ideas, in order to construct knowledge about the world, use thinking skills, processes, and imagine.	*PARENT/PRIMARY CARETAKER* • Has the means to provide child concrete materials and diverse experiences. • Encourages child's exploration and manipulation of a wide variety of objects. • Provides child with toys, games, and/or household objects for matching, sorting, classifying, comparing, sequencing, and counting, and sometimes assists child in using the materials for those purposes. • Encourages child to engage in dramatic play and provides time, a place, props, and access to other children so (s)he can do so. • Provides child with a wide variety of enjoyable, firsthand experiences that build his or her knowledge in art, music, movement, arithmetic, science, health, safety, and social studies. • Provides opportunities for child to interact with people of different ages. • Talks with child about his or her past and future experiences, encouraging child to recall and describe past events and anticipate and help plan future ones. • Routinely asks "Why?", "What if?", and "How?" questions; provides time for child to respond. • Teaches child how to solve problems. • Encourages child's natural curiosity.	Has formed basic ideas about the physical and social world. Uses such knowledge to solve problems of personal importance.

Promoting students' ability to use knowledge and skills to solve problems and make decisions is a major goal of education in Maryland's public schools. As early as first grade children will be expected to apply their knowledge and skills to real-life contexts. Those who enter school with a broad background of information, and experience in using a broad array of thinking skills, will clearly have an advantage over those who do not.

Knowledge and thinking are related to children's cognitive development. Although philosophers, educators, psychologists, and neurobiologists hold competing theories about what cognition/intelligence consists of and how it develops over time, in the broad sense it can be defined as the process of forming mental schemes of the physical and social worlds and using those schemes to function in the environment. Cognition itself involves four different functions: perceiving, organizing and storing perceptual data, recalling data that has been stored, and using data. Each of these functions involves a number of thinking skills or strategies.

Perception is the process of taking information in through the senses by observing, listening, touching, tasting, and feeling. Young children are perceptual or concrete learners. What they know derives from what they experience directly. Perception primarily involves skill in discrimination, which is not well-developed in young children. They tend to notice general features of an object or event, but not attend to details.

In organizing data taken in through the senses, children compare, classify, sequence, discern cause and effect, interpret, evaluate, and transform. They relate the new information to their existing mental schemes, fitting it to those schemes, changing them, or creating new ones. As they do so they construct their own knowledge, storing it, for example, as concepts, principles, or rules. However, insofar as children's knowledge is perceptually-bound, what they know may be replete with errors, contradictions, and inconsistencies, at least from an adult perspective.

The ability to recall information is determined, in part, by the way it has been stored. It is also related to children's perception of the information that is needed in a particular situation. As such, visualizing, planning, and reflecting are important components of the retrieval process. They aid remembering by focusing attention on what one is trying to learn or do and/or has previously learned or done. Solving problems, making decisions, reasoning about experience, composing, and creating are all higher-order thinking skills which are called into play when children use information. Although complex in nature, young children routinely use them to cope with the experiences they encounter in their everyday environment.

Through experience, children construct and re-construct their knowledge of the world. The knowledge they construct falls into two categories: how to do things such as care for a pet, be a friend, or count money, and knowledge of things themselves, for example, pets, friends, and money. Children only modify their mental schemes of peoples, things, events, and procedures when they notice a discrepancy between what think and what they perceive in the outside world. In order to resolve discrepancies they construct new understandings which are more accurate and complex than the ones previously held. The process of discrepancy resolution, therefore, promotes children's cognitive development.

Children invent and re-invent knowledge through direct experiences with people and things. They thus need a wide variety of toys, objects, and other materials to observe, explore, and manipulate. As they experiment with objects and act on the environment, they figure out how to do things. They also confirm or discard their hypothesis about what objects can do and what they can do with them. This knowledge, constructed through play, serves as the foundation upon which all subsequent learning is built.

Children need social as well as physical interactions in order to construct knowledge. Adults and peers are an important source of procedural and content area knowledge. Additionally, they serve as sounding boards against which children can test the accuracy of their thinking. Remarks made by others are frequently the impetus children need to change their mental schemes of reality.

Most experts now believe that intelligence is many different abilities that may develop independently of others. Gardner, for example, has proposed seven potential abilities: linguistic, musical, mathematical, spatial, bodily-kinesthetic, personal, and interpersonal intelligence. The foundation of these abilities is laid down early in life. Since there is no way to predict what children will become, they need opportunities to construct knowledge in each intelligence. Only through a multitude of firsthand experiences in language and literacy, music and movement, math and science, and social/cultural understandings will children have the opportunity to demonstrate and realize their individual potentials.

Young children's thinking is both quantitatively and qualitatively different than that of older children. They have more simplistic understandings of the world. Their thinking is concrete and intuitive, rather than logical and abstract. Still, in exploring the world and confronting reality children use a wide range of thinking skills. Consequently, they need experiences that improve their ability to think.

Providing time, opportunities, and props for children to engage in dramatic play is essential to developing their capacity to think. According to Nelson and Schaefer, the ability to make-believe, pretend, and assume a playful posture is linked to the development of divergent thinking, the basis of higher-order thinking skills. Through symbolic or imaginative play children elaborate their mental schemes, strengthen their capacity to take a "what-if" attitude, and improve their ability to deal with hypothetical situations.

Young children have the capacity to think in many different ways but, their capacity to think will not develop in the absence of developmentally appropriate mental challenges and adult guidance and support. Parents and caretakers should give careful consideration to the types of materials they provide for children's play, the kinds of activities in which children are engaged, and the communicative functions they model and use in interacting verbally with children.

Children's play should provide them practice in using both essential thinking skills (observing, classifying, sequencing, counting, and reasoning) and higher-order thinking skills (problem solving, creating, constructing, and composing). Puzzles; shape, color, and number games; stacking blocks; and science materials all foster children's ability to sort, order, discriminate, classify, observe, and predict. Open-ended materials, such as blocks, blank sheets of paper, and Tinker Toys invite them to construct and create. In contrast, most coloring books, workbooks, and television programs do not make cognitive demands on children. Rarely, if ever, do they engage their minds.

In *Educating the Young Thinker,* Copple, Sigel, and Saunders maintain that young children should be involved in "distancing events". Such events require them to deal with experiences that are separate in time or space from the immediate present. The way adults talk with children fosters or diminishes their mental capacity to move backward and forward in time. Parents and caretakers should involve children in conversations about past experiences, helping them recall and reflect on previous events. They should also help children visualize and plan future experiences. Additionally, adults should ask open-ended questions. Questions that take the forms of "how", "why", "what if", and "suppose", strengthen children's mental flexibility and promote their capacity to deal with the unknown.

When confronted with experience children solve problems using whatever knowledge and skills are at their command. In order to become *effective* problem solvers they need direct intervention from adults. Adults should help children learn how to think through problems, recognizing that problems usually have more than one solution and different solutions often lead to different outcomes. In most cases, the course of everyday life will give rise to situations that enable adults and children to talk through the problem solving process.

Nature has not programmed children for failure. They are born wired to investigate, seek knowledge, and think. What nature cannot program is adult support in nurturing children's capacity to think. If adults scold, punish, or restrain children's natural curiosity and endless questions, they will eventually stop asking questions and being curious. If they limit their interactions with people and things, channeling them into activities that are quiet, passive, or tidy, children's knowledge and thinking will be limited. If adults are rigid and authoritarian, expecting children to do everything their way, solving children's problems for them, and making them feel ashamed of their flights into fantasy, then children's minds will never soar where only their imagination can take them.

h. ***Language Acquisition***

Experience	*Indicators*	*Outcome: The Child*
Is immersed in a language-rich environment in which adult forms of language are heard and modelled and language conventions and usage are acquired through conversation with others, primarily adults.	*CHILD* • Feels (s)he can babble, talk, play with language, sing, and ask all kinds of questions without being quieted or belittled. *PARENT/CARETAKER* • Routinely listens to child, interprets the meaning of his or her utterances, and responds with language accommodated to his or her level of development. • Allows and encourages child talk and experimentation and play with language. • Uses child's firsthand experiences as a context for expanding his or her vocabulary and language usage. • Extends child's vocabulary and language usage through picture books, songs, nursery rhymes, fingerplays, and a limited amount of educational television. • Models adult forms and functions of language. • Models ways of asking questions, encourages questions, and provides age-appropriate responses. • Models, encourages, and provides frequent opportunities for child to use language to report on past and present experiences, explain events, pretend, and project into the thoughts, feelings and experiences of others.	Speaks clearly and for a variety of purposes, using expanded sentences most of the time. Listens to and understands others.

Oral language acquisition is essential to children's success in the initial grades of school. It enables them to function effectively in the social system of school, where adult-child and child-child interactions and classroom rules and routines are established and maintained primarily through verbal communication. It serves as the foundation for learning to read, a major task of primary education. A plethora of studies show a strong positive relationship between the quality and quantity of oral language children bring to the reading situation and their ability to make sense of print.

Acquiring language is the active and social process of learning how to use words for intentional and meaningful communication. The process consists of acquiring and attaching meaning to words (semantics), and learning how to form words, phrases, and sentences (grammar) and use speech in various social contexts (pragmatics). Language development is motivated by children's need to receive attention from others, express needs, desires, and ideas, and find out about things in the environment. It is acquired by participating in dialogue with others about topics of personal interest. Children require attentive partners to become effective listeners and speakers.

The period from 1 1/2 to 6 years of age is critical for language learning. During this time, children progress through distinct stages of social language and language structure, although at different rates. The first stage of social language emerges when toddlers begin to talk to themselves about their own activities. It evolves into the stage of parallel speech, where children talk in the company of others, but only in reference to themselves. In the final stages, children talk collaboratively with others about concrete and, then, abstract ideas.

Different from the child's use of language in social situations is the structure of this language. Toddlers use only one to three words to represent a segment of intended communication. The listener must look beyond the words to visual messages, for example, facial expressions and actions, to understand the communication. By five or six years of age, children's language is mature and similar to that of adults. Most grammatical rules have been mastered; language patterns are intricate and complex. As preschool children progress through the developmental stages of social language and language structure, they expand the purposes for which language is used and significantly increase their vocabulary.

Language is not acquired purely through imitation. Most linguists believe that young children invent and re-invent language by noticing, abstracting, and generalizing its rules. Children become language users by mapping and listening to others map language onto experience. Therefore, the language used by others, the expectations others, particularly parents and primary caretakers, have for children to use language, and the assistance adults provide, have a major impact on the quantity and quality of children's language acquisition.

To assist with language development, primary caretakers must be attuned to children's developmental level and responsive to their oral signals and cues. Effective parents and caretakers routinely, and often unconsciously, use a number of strategies that build their youngster's communicative abilities. They adjust the rate at which they talk, the length of their sentences, and their vocabulary to the child's comprehension level. They listen attentively, ask for additional information, fill in by answering their own questions, paraphrase the child's utterances, and engage the child in game-like routines such as peek-a-boo and book reading. These verbal scaffolds, or expansions, adjusted to the cognitive level of children, provide them with clear language for deciphering linguistic rules. Rendered with the expectation that children will gradually assume more and more of the script, they help them learn how to contribute relevant ideas to discourse.

As adults speak to children, the nature of their language gives children information about how talk is constructed for particular purposes and in particular situations. Children, in turn, internalize and model what they hear. Children's language development is enhanced in environments where adults use language for a wide range of purposes including to acquire and report information, maintain relationships, enjoy and imagine, and solve problems. Learning to use language to think is particularly important to school success. If language is to contribute to children's ability to think more efficiently, then adults must model ways of using speech to think about and interpret experience.

According to Schachter, responsive, rather than directive, speech fosters both communicative and cognitive competence. Adults who speak responsively with children initiate topics of conversation

that are meaningful to them and use comments and open-ended questions to sustain conversation initiated by them. They model ways language can be used to explain events, predict, project into the feelings of others, and report on past and present experiences, and encourage children to use language in similar ways. Adults also model investigative language strategies, providing children many opportunities to ask and respond to questions.

Adults frequently help children acquire language through direct teaching. They tell their children what to say or ask in particular situations, teaching them, for example, greetings, thanks, and farewells, or how to use language for personal safety, self-defense, or to negotiate disagreements. Such spontaneous instruction, provided in the course of conversation about real-life situations, improves children's skill in using language for interpersonal purposes. It must be context-embedded, however, as children can only build understanding of the many meanings of words when they are associated with specific uses in particular and meaningful contexts.

Another focus of direct instruction in spontaneous adult-child conversations is vocabulary development. In conversations about firsthand experiences and in book reading, adults often provide verbal labels for objects and events. This form of language development assistance is useful, but only when it evolves from or leads to direct experience. When new words and concepts do not make sense, children discard them. The richer and more diverse young children's firsthand experiences, therefore, the more words they will acquire and comprehend.

Experimentation is an important aspect of language acquisition. Through the use of big words, bad words, nonsense words, rhymes, and jingles, young children create their own knowledge about what words can do and what they can do with them. By engaging in bedtime monologues and daytime dialogues, children practice grammatical skills and develop proficiency in expressive and receptive language. Adults who understand the important role of language play in helping children develop communicative competence accept and encourage child talk, whatever form it takes.

Most children learn to speak the language of their home and community by the time they enter school. Some home and child care environments, however, hinder language development. First and foremost, children learn language by talking with attentive adults who provide feedback about their effectiveness in communicating the messages they wanted to convey. In settings where active listeners or conversational partners are unavailable; where adults use language to direct and discipline children, but not to interact with them; where children are expected to be seen, but not heard; or where adults accept one-word responses from children who are able to speak in expanded sentences, children's interest in language wanes and they lose the motivation to talk. When adults fail to draw children into particular ways of thinking using language as a vehicle, children are at risk for reaching their potential as both thinkers and communicators.

Adult approval, expectation, and praise are essential to children's language development. Belittling, embarrassing, or quieting them has a negative impact on their self-confidence. Research shows that correcting children's language rarely leads to improvement, but may lead to a sense of failure instead. Frequent corrections may cause children to avoid speaking altogether.

Dialects rarely interfere with language learning, but in an environment where children's dialects are disrespected or erroneous conclusions are drawn about children based on the way they talk, children often feel alienated and may become withdrawn. Adult attitudes toward children's language influences their desire to talk. Although young children with dialects need to be exposed to and hear the language of mainstream culture, they more importantly need to interact with sensitive adults who appreciate the complexity and richness of their dialect and culture.

i. *Self-Control*

Experience	*Indicators*	*Outcome: The Child*
Positive guidance techniques are used to help the child develop self-discipline.	*PARENT/CARETAKER* • Is patient and gentle in dealing with infant behavior. • Establishes a reasonable number of necessary limits, appropriate to the age of child. Clearly communicates them, their reasons and the consequences of violating them to the child. Holds child to them. • Disciplines child by rewarding expected behavior, reminding child of limits, re-directing the child, or directing him/her to non-punitive consequences. • Models ways (s)he expects child to behave. • When limits are violated, renders timely corrections in a calm, quiet manner and involves child in problem solving. • Refrains from using any form of physical, emotional, or verbal abuse as punishment. • Ensures that guidance techniques used at home and in child care settings are consistent.	Demonstrates self-control appropriate to his or her age.

First graders are expected to follow rules, work cooperatively with peers, use give-and-take to participate in group activities, and persist at independent tasks without distracting others. Children who lack self-control may have difficulty meeting these expectations. Their inability to regulate their own behavior may set them on a course of failure for two reasons. First, children who are out of control cannot learn and are at risk of falling behind. Secondly, disruptive children are often disliked by their classmates. Alienated from their peer group, they often lose interest, not only in learning, but in school itself. In order for children to succeed in first grade, they need to acquire an age-appropriate level of self-control.

Self-control is the ability to regulate one's own behavior, to resist temptation, and to deny one's self immediate gratification in order to obtain future rewards of greater consequence. From a behaviorist perspective, it develops in response to the consequences of behavior in the immediate environment in which it occurs. Children behave one way or another in order to avoid negative consequences and receive positive reinforcement. From the point of view of interactive theorists, self-control is the result of building mental constructs of right and wrong, good and bad, and acceptable and unacceptable behavior, and of the sanctions that will be rendered against unacceptable behavior. Over time, these mental structures become dispositions that guide children's behavior. Whether the development of self-control is understood in terms of behaviorism or interactive theory, one thing is perfectly clear. Self-regulation evolves from children's perception of the consequences that will ensue as a result of their behavior.

Learning self-control is part of the socialization process in which adults have a critical role. Parents and other caretakers help foster self-control by the ways in which they interact with children prior to and in response to their behavior. Antecedent practices that promote self-control include cuing, modeling, expectancy, and limit setting. Among the most important consequent practices are induction, direction toward consequences, and problem solving.

A cue is a verbal statement that directs children's behavior, for example, *Please stop shouting* or *Don't hit Tanya!* Adults frequently use cues in their daily socialization efforts; their effectiveness depends on children's perception of the consequences of not responding and the frequency of their use. Excessive directives to behave in one way or another amount to harping, which children of all ages gradually tune out.

Bandura and Mischel have demonstrated that children's self-imposed delay of gratification patterns are highly influenced by the behavior of models they observe and the response of others to that behavior. Through observation children draw conclusions about behavioral dispositions that are favored or disfavored. They then try to behave in ways that are favored, expecting similar positive consequences for adopting the behavior displayed by the model. Modeling can have inadvertent effects, however. When children observe adults or peers who continuously demonstrate impulsiveness, disrespect for others, and disregard for rules without negative consequences, they learn disrespect, impulsiveness, and to have little regard for limits.

Expectancy is an important determinant in the development of self-control. On one hand, children must believe that they are able to behave in the ways that are preferred. On the other hand, they must feel confident that a reward that is of value to them, such as affection, praise, or a desired toy, will be forthcoming. Parents and caretakers often make promises on which they forget to deliver. This not only diminishes children's trust in the promise giver, but, also, in their future willingness to exert self-control.

Parents and caretakers need to be aware of children's developmental characteristics, capabilities, and limitations, helping them acquire self-control, but not expecting too much, too soon. Crying, messiness, willfulness, noisiness, aggression, and limit-testing are characteristic behaviors of infants, toddlers, and three-year-olds. Moreover, these dispositions are integral to the establishment of an identity. Expecting or forcing young children to be neat, quiet, cooperative, and obedient is not likely to promote their impulse control. Rather, it may cause frustration, increasing the probability that they will act out.

Learning self-control takes time. Children need to feel competent at their current developmental level. Parents and caretakers should praise and hug them when they are in control, rather than scold or criticize them when they are not. Adults also need to realize that young children may not have developed the necessary mental structures to infer the effects of their actions on persons and things in the environment. When they write on walls or snatch toys it may be because they are not aware of the consequences of their behavior. Instead of responding negatively, parents and caretakers should offer guidance by talking with children about their actions.

To help children build mental constructs of right and wrong, adults should set fair limits, provide reasons for them, and explain the consequences of violating them. The limits should be compatible with children's developmental level. Too many limits are easily forgotten; they also restrict curiosity and exploration, fundamental prerequisites for learning. To avoid confusing children, the limits and consequences that are established at home and in child care settings should be consistent. Most parents and caretakes have only one rule: children may not engage in behavior that hurts self, things, or others.

The term "discipline" refers to adults' responses to children's inappropriate behavior. The best discipline techniques immediately follow the behavior and help children learn how to balance their needs, wants, and wishes with those of others. They are always applied in ways that keep children's dignity intact.

Inductive techniques can precede or follow children's behavior. Inductive techniques are similar to cuing, but provide reasons for the preferred behaviors, usually in terms of the behavior's impact on others. *Don't pull the dog's tail; he might bite you,* and *Tony will be upset if you break his truck*, are examples of adult socializing efforts that fall in the inductive category. Research suggests that the use of other-oriented inductive strategies are highly related to the internalization of behavioral standards. According to Hoffman, one probable reason is that they arouse feelings of guilt.

Some situations only require adults to direct children to the logical consequences of their actions, without being punitive. The toddler who has spilled milk can clean it up. Similarly, the four-year-old who misplaces a toy can help find it. Direction toward consequence strategies help build self-regulation by teaching children to accept responsibility for the outcomes of their actions.

The most effective discipline strategy is to encourage children to reflect on their behavior, think of alternative solutions, and the possible effects of taking those actions. Through problem solving children begin to understand that they can control their behavior and that they have choices in deciding how to act. Young children need a fair amount of adult assistance in generating alternatives, however; it is only with practice that they will learn to develop them on their own.

Children's first efforts to function as social beings take place in the warm, personal settings of home and child care. Parents' and caretakers' styles for socializing youngsters thus have a significant impact on what they become. Authoritarian-restrictive adults and/or adults under stress often use punishment to correct children's inappropriate behavior. In contrast, permissive adults do not consistently enforce any rules at all. They constantly dismiss or excuse children's inappropriate acts. In spite of their differences, permissiveness and authoritarianism lead to similar outcomes: both styles place children at risk for developing inner controls to handle future problems.

Children are punished when their behavior is controlled through force or fear. Spanking, yanking, humiliating, ridiculing, shaming, and withholding love, affection, or food are forms of punishment that can have long-term negative consequences. Used in combination or on a continuous basis they constitute abuse. The most dangerous age for children to be subjected to abuse is between three months and three years of age. Abused children often grow into adults who, in turn, abuse their children.

There are times and circumstances when punishment can be used to advantage. A mother's sharp rebuke to a child who is about to venture into the street may have the immediate effect of protecting the child from danger. Likewise, a caregiver who removes a child who is about to throw blocks from the block corner averts possible harm to other children. To protect children from harm or harming others, gentle punishment may be necessary. However, it should be meted out in small measure during early childhood. Young children, who are vulnerable, impulsive, and socially naive, need warm, rational, supportive adults to help them negotiate the path to self-control.

j. ***Autonomy***

Experience	*Indicators*	*Outcome: The Child*
Is encouraged to do things on his or her own and provided time and opportunities to do so, while being protected from harm.	*PARENT/CARETAKER* • Allows child to have choices and make decisions and follows through on choices and decisions child makes. • Helps child acquire self-help skills related to dressing, personal hygiene, and care of personal property. • Provides opportunities for, and expects child to help with chores commensurate with his or her age and ability. • Encourages and allows child to pursue activities and interests on his or her own, while being available for assistance and conversation. • Encourages and allows child to take age-appropriate risks in order to find out what (s)he can do. • Models and talks about the value of effort, persistence, and initiative. Encourages child to demonstrate such dispositions and praises him or her for doing so. • Teaches child socially acceptable ways for protecting his or her property rights and right to play without interference from others. • Refrains from punishing or criticizing child for accidents, forgetfulness, or taking too long.	Has a sense of personal efficacy; can play (alone or with others), and perform age-appropriate tasks independently.

In the first grade, children are expected to work alone, perform routine tasks, and follow through on directions with a minimum of help. Children who start school with prior experience in doing things for and by themselves are able to handle first grade independence. Those whose prior experiences were characterized by excessive prohibitions, thwarted attempts at self-reliance, or absence of challenge or expectation have difficulty in first grade. Being passive and dependent (and lacking self-esteem), they feel less adequate and act as if they are less capable than their more self-directing peers.

Becoming autonomous as manifested in acting independently, demonstrating initiative, and being responsible, is a major task of early childhood. It is tied to the formation of attachment behavior. During the first year of life, infants behave in a variety of ways in order to find out how to affect others. In this manner, they learn how to evoke responses from their caretaker(s) and, also, how to influence those they love. Infancy evolves into a period of self-assertion during which time toddlers reject parental choices and initiatives, demanding to do things their own way instead.

Self-assertive 18-month-olds gradually become "terrible twos". Two-year-olds are aware of their own effectiveness, as well as their caretakers' standards and love. To reduce their uncertainty about the degree to which caretakers who show love will also express disapproval, two-year-olds test limits,

challenge standards, and resist control and coercion. In the process, they develop autonomy and an even stronger sense of efficacy, but also learn the limits of independence and personal control.

Once children feel themselves to be autonomous, they begin to pursue activities on their own. The preschool period, from ages 3 to 6, is critical for the development of initiative. Children try to manage for themselves and are eager to do things on their own, but always judge their accomplishments against expectations set by others. In order to exit the preschool period confident that their own initiative and effort will ultimately lead to success, four- and five-year olds need caretakers who reward, rather than criticize, their efforts to act independently.

Parent and/or caretaker style have a significant influence on children's growth and self-reliance. Three clusters of childrearing variables, in particular, seem to influence whether children exhibit independence and free will or learn dependence and helplessness. The first variable concerns the kinds of opportunities available to the child, including such factors as parental expectation and encouragement. The second is experience, encompassing the nature of parental demands and adult responses to the child's attempts at autonomy. The third set of variables focuses on the consistency of attitudes among adults with whom toddlers and preschoolers spend their time. Where different requirements for independence exist among parents, child care providers, and preschool teachers, children become confused, which ultimately leads to frustration, anxiety, and increased dependence.

Children learn through their own experiences and thus need to be with adults who expect them to act autonomously and provide opportunities for them to do so. Young children should be allowed and encouraged to express their points of view and preferences, make decisions, test their limits, and govern their own actions, living with the consequences. They should be expected to learn a variety of self-help skills, especially those related to personal hygiene and care of personal property. Even before they go to school, children should begin to help with chores, which not only imparts a sense of power and self-pride, but, also, teaches responsibility and the importance of being a contributing group member.

While children need and want freedom, choice, and responsibility, they also need and want adult support and reassurance. Most children learn how to perform tasks on their own, first by trying them out with the help of others. They learn that effort, persistence, and self-initiative contribute to the successful completion of a task when adults model and talk about such dispositions. Children's protection from interference from others and right to their own thoughts, feelings, and property are integral to autonomy. Adults need to respect children's right to independent activity, personal property, and private thoughts and feelings, and should teach children socially acceptable ways to stand up for their rights.

Children become independent when adults balance reasonable expectations with tolerance and acceptance. At each stage of development children have different patterns of strengths, weaknesses, and interests. Adults' demands, in terms of their levels of complexity, methods, and rates of completion, should match children's developmental capabilities. They should challenge children, but provide maximum chances for success. Adult expectations for autonomy that exceed children's

capabilities, mandate conformity, entail comparison and competition between children, or do not provide relief from frustration, diminish children's self-confidence and, in turn, their quest for autonomy.

Young children's sense of adequacy is tied to their perception of their ability to live up to adult expectations. How adults react to children's efforts to be self-assertive and self-reliant determines whether children become independent. Adults' body language, voice tone, and verbal comments all send messages which children use as criteria for judging themselves. Whether children become self-critical or self-confident depends on whether adults' messages are positive or negative. Parents and caretakers who punish, shame, or humiliate children for forgetfulness, making mistakes, or taking too long, impart a fear of failure, destroying their will to become independent.

Girls, handicapped children, children of overprotective parents, and children in child care or preschool programs where adult-directed activity dominates are most at risk for not developing initiative and independence. Adults who expect and reward dependence and who do for children what they can do for themselves raise children who have little motivation to be self-reliant. Children do need protection from physical and psychological harm, but occasional frustration, disappointment, and failure contribute to their growth in independence. Adults who do not allow and encourage children to learn from their own experiences, shrink their world and, ultimately, delay their readiness for school.

k. ***Social Behavior***

Experience	*Indicators*	*Outcome: The Child*
Learns appropriate social behavior by observing, modelling, and interacting with adults and peers.	*CHILD* • Has frequent opportunities to play with other children around his or her age. *PARENT/CARETAKER* • Models acceptable standards of social interaction including consideration, helpfulness, kindness, cooperation, sharing, friendliness, and concern for others. • Provides reasons for appropriate social behavior that focus on the feelings and reaction of others. • Helps child learn how to use language to negotiate social conflicts. • Deals with child's awareness of differences by helping him or her learn about similarities among people. Refrains from making negative or stereotypical remarks about people based on their race, culture, gender, or physical abilities/appearance. • Expects child to behave in socially acceptable ways such as sharing, taking turns, and waiting his or her turn. Praises child when (s)he does and corrects him or her when (s)he doesn't. • Limits child's exposure to violence and aggression in the media. • Uses expressions of courtesy and helps child learn to use them.	Interacts with others, most of the time, in socially acceptable ways.

Children's social skills play a major role in their readiness for school. To function in the social world of the classroom children should be able to cooperate, share, take turns, be helpful, show consideration for others, and solve conflicts in non-aggressive ways. Correlational studies suggest that children who do not know how to deal with others and function as part of a group have adjustment problems in first grade. Learning how to initiate and maintain positive social relationships and re-

solve interpersonal problems in socially acceptable ways, therefore, are critical early childhood tasks.

The socialization process begins in infancy when the emotionally dependent baby learns how to elicit and maintain adults' nurturing and affection by behaving in ways that please. Beyond infancy, the development of positive social behaviors is dependent upon three factors: having ample opportunities to play with peers, having appropriate models, and caregiver teaching. Altogether, these three experiences provide children with the information and practice needed to develop the social skills that are crucial to readiness for school.

Children's egocentricity is not favorable to establishing peer relationships. It is only through play with peers, however, that they learn how to interact with others. Through play, children learn and practice social access skills, for example, how to initiate interaction or join a group, and social maintenance skills, for example, being tolerant of others and their needs, helping others and receiving help from them, and sustaining conversation. Play helps transform egocentric children into social individuals who recognize others' points of view and relate to them in socially acceptable ways.

Caregivers enhance or diminish children's social development by the instruction they provide. First graders who are friendly, considerate, and cooperative have caregivers who rely on verbal exchange to teach, demand, reinforce, and handle violations in the display of appropriate behaviors. Focusing on the social benefits, such caregivers provide reasons for expected behaviors. Focusing on the victim, they explain the costs that were borne and expect children to make restitution. As part of their teaching efforts, adults consistently praise or express disapproval of children's social behavior.

Observation and imitation play a significant role in the development of social behavior. Some experts and researchers, such as Bandura, Rosenhan, and Baldwin contend that models have a far greater impact than teaching and preaching on children's socialization. Parental and caregiver teaching can be offset or reinforced by the behavior they themselves model, or by the behavior children see modeled by others. Children who constantly observe aggression, selfishness, inconsideration, and racial intolerance, act out what they live or see in their daily lives.

Parental and caregiver information and motivation are more important than socioeconomic status in promoting children's acquisition of positive social skills. Children who are at risk for developing in socially acceptable ways have parents and caregivers who teach social values by threat or force, focus on what children shouldn't do rather than on what they should, and/or provide few opportunities for children to practice social skills by playing with others. They may simply be too permissive. Parents and caregivers who don't expect or demand appropriate social behavior tend to raise children who are self-serving, aggressive, and cruel.

I. *Information About Literacy*

Experience	*Indicators*	*Outcome: The Child*
Is immersed in an environment in which learning about reading and writing is a playful and interesting part of everyday life with adults and siblings.	*PARENT/CARETAKER* • Has access to books and magazines for children and other print materials. • Provides opportunities for child to tell and re-tell familiar stories. • Encourages and provides time for child to handle books and read on his or her own. • Provides time, tools, models, and encouragement for drawing, scribbling, and creating print independently. Enthusiastically accepts child's initial writing efforts with all their "mistakes". Does not require child to form letters correctly. *LITERATE ADULT OR SIBLING* • Reads to child everyday using a wide variety of literature including poetry, ABC books, and picture books, both fiction and non-fiction. While reading, asks questions and answers child's questions about the pictures and story. Involves child in re-reading books. • Points out and talks about print on signs, packages, and other everyday objects in the home and community. • Models literacy by reading and writing in sight of child and inviting him or her to help; for example, help write shopping lists, make greeting cards and labels, read the mail, and shop for groceries. • Provides opportunities for child to play alphabet games. • Helps child learn how to form letters correctly, and/or to write his or her name when, and if, (s)he expresses an interest.	Has some information about what reading and writing are for and how people read and write.

Starting school with knowledge about the form and functions of written language contributes to children's success. Numerous studies have shown that, in comparison to children who start school without a background of experiences with print, children who are engaged in literacy-related activities from birth on demonstrate higher achievement in reading and writing. Early immersion in age-appropriate literacy events lays the foundation for later literacy learning, helping children better handle the language arts expectations of first grade and beyond.

Literacy development is the active process of discovering how to make sense of written language, of extracting meaning from print (reading) and transmitting meaning through print (writing). It is based on the acquisition of three major principles: (1) when and how written language is used and for what purposes, (2) how written language is organized including concepts of alphabet, spelling, punctuation, directionality, and space, and (3) how written and oral language relate to each other and to the act of communicating meaning. These principles cannot be taught directly. Children construct them gradually over time as they interact with reading and writing in contexts that highlight the need for written language, the significant function it serves, and the joy and satisfaction it brings. In literacy-rich home and child care environments, most children construct rudimentary knowledge about these principles long before they start school.

Recent research has prompted a reformulation of four traditional beliefs about how and when children's awareness of literacy emerges. The first re-formulated belief is that learning to read and write begins when children start school. Literacy development proceeds along a continuum, beginning in infancy with the baby's first exposure to books and environmental print. All children start school with a background of knowledge about written language. Differences among them are related to

their prior experiences with literacy, not their age, gender, race, culture, or socioeconomic background.

The second erroneous belief is that listening and speaking, reading, and writing are discrete processes that children learn in sequential order and in isolation from each other. In actuality, reading, writing, speaking, and listening develop concurrently and in an interrelated manner. Reading promotes language development, language development contributes to reading proficiency, and writing improves children's reading skills. Children need experiences in all aspects of oral and written language in order to become literate.

It is often thought that children learn to read and write from part to whole. Consequently, in order to get children ready for school, parents may focus on helping them learn letters and letter sounds, neglecting more relevant activities. Insights from studies of early readers indicate that young children learn from whole to part. First, they use reading and writing to accomplish their own goals. Then, in the process, they acquire knowledge about reading and writing conventions. If children are provided with opportunities to read and write with an emphasis on function and meaning, knowledge about the forms print takes will naturally follow.

The final belief that has undergone re-formulation is that learning to read and write is a formal process divorced from concrete experience. To the contrary, literacy develops from firsthand experiences in which reading and writing are used in activities directed toward some goal other than literacy itself. For example, children and their parents or caretakers may follow a recipe to bake cookies, select a birthday card for grandmother, or read the Bible together. Young children cannot learn to read or write if either is separated from real-life contexts that are meaningful and interesting to them.

New insights into how children learn to read and write reveal that they grow into literacy differently than older children and that adults play a critical role in their emerging literacy competence. Just as oral language develops in concert with significant others, particularly parents and caretakers, so also does written language development depend upon adult mediation. The role of adults is not to teach reading and writing in the formal sense, however. Rather, it is to immerse children in literacy experiences such as demonstrations, shared reading, literacy play, alphabet games, and independent explorations of print, through which they can discover the principles of written language.

Children become enculturated into literacy by being around people who routinely read and write. Parents and caretakers serve as models for children, demonstrating literate behaviors. As children observe them reading and writing for a variety of everyday purposes, they construct their own intuitive knowledge about the functions of written language. As adults invite children to participate in their functional print activities, children figure out what people do when they read and write. Knowing how reading and writing work and why people read and write are two of the most important learnings children can acquire about written language before they start first grade.

Another important activity for building the knowledge and skills eventually required for reading and writing is reading aloud to children. In this, both the amount and choice of reading materials seems to make a difference as does, also, the nature of child-adult interactions with the written text.

Reading to children demonstrates how readers engage in the process. Additionally, research has shown that when adults read to children and expand on their text-related comments, relate the text to their own experiences, use the text to enhance their thinking, and ask progressively more challenging questions about text content, children show significantly better receptive and expressive language and vocabulary development.

Children need to be exposed to a wide variety of books in order to acquire general knowledge, strategic reading behaviors, and become familiar with print conventions. Wordless, picture, and storybooks contribute to children's understanding of how stories and other forms of print are constructed. Concept and information books expand children's background knowledge, improving their ability to understand increasingly complex text. ABC books and books with poetry, nursery rhymes, and fingerplays increase children's awareness of the cadence and rhythm of language. They contribute to children's perception of the sounds that words and letters make. All such books, when read to children on a routine basis and accompanied by opportunities for children to use memory and the pictures or words to re-read or re-tell the "story", help them acquire strategic behaviors that pave the way for independent reading.

The very youngest children need to be allowed to experiment with writing in order to learn how to form letters of the alphabet, discover what units of speech are represented by letters, explore how to vary form and style depending on the purpose, and find out how readers will react to what they have written. Parents and caretakers who want to encourage children to write must provide time, opportunities, materials, and support for them to do so. They should respond to children's attempts with interest and display enthusiasm toward their written products. While responding to children's questions and offering ideas and strategies as requested, parents and caretakes should refrain from telling them how or what to write.

Young children learn to write through a process of pleasurable approximation. Risk-taking and error are integral to the process. When children first attempt to create print, their writing consists of drawing and scribbling. Over time, and with repeated exposure to written language and experimentation with writing, scribbling gradually transforms into inventive spelling, then conventional forms of print. What is critical to sustain children's interest in writing, is adult acceptance of children's non-conventional print.

Children should start first grade able to recognize the letters of the alphabet and should be familiar with some letter sounds. However, learning about letters takes time and practice and requires careful visual attention. Learning the alphabet should not be the exclusive or primary focus of children's pre-school literacy experiences but, adults should introduce them to alphabetic principles in informal ways. Learning the alphabet song, fooling around with magnetic letters, having letters in environmental print that captures their attention pointed out, being encouraged to spell words during their experimentation with writing, and having adults model the process of sounding out words, are all strategies that increase children's awareness of letter names and sounds.

Homes and child care settings that do not encourage children's literacy development by immersing them in meaningful print activities place them at risk for learning to read and write. Such homes and child care settings cannot be identified by income, parent educational level, culture, or race, but,

rather, by the values and lifestyles of the social communities to which they belong. Even when children from environments where reading and writing are not valued, modeled, or practiced attend kindergarten, 540 hours of kindergarten cannot make up for five years of literacy deprivation.

In contrast to settings where literacy development is not encouraged, homes, day care settings, and preschools that place pressure on young children to learn isolated reading and writing skills prematurely, also place them at risk. Given a multitude of experiences in which reading and writing are used to accomplish greater goals and provided many opportunities to explore reading and experiment with writing independently, most children will learn print conventions. Expecting or forcing them to form letters and spell correctly and/or learn letter sounds before they have figured out how and why people read and write threatens their self-confidence and destroys their motivation to make sense of print.

3. Recommendations

1. The Maryland State Department of Education should collaborate with every agency that provides services to families and children to develop and implement a plan for ensuring that parent education is an integral component of every agency's service delivery system.

2. The Maryland State Department of Education and sub-cabinet of the Office of Children, Youth, and Families should collaborate with the media in waging a statewide public awareness campaign that informs citizens about the experiences children need to start first grade ready to learn.

3. As part of any public awareness campaign, the Maryland State Department of Education, in collaboration with the Department of Health and Mental Hygiene, and Office of Children, Youth, and Families should develop an informational brochure and make it available to mothers when they receive their child's birth certificate.

4. The Department of Health and Mental Hygiene and Human Resources should collaborate with schools in identifying the needs of children and families and should use schools as sites for the provision of needed services.

5. The Maryland State Department of Education, Office of Children, Youth, and Families and Departments of Health and Mental Hygiene and Human Resources should pool fiscal resources to re-print *Your Child Goes to School* and develop and disseminate other materials that increase parental awareness of the experiences children need to get ready for school.

6. The Maryland State Department of Education, in collaboration with institutions of higher education and the Maryland Congress of Parents and Teachers, should develop a videotape series on school readiness and place copies in video stores and public libraries.

7. A parenting course should be required for high school graduation, not just a required part of a course in health education.

8. The Maryland State Department of education should designate a parent education specialist to work with agencies, institutions, and businesses, in developing strategies for increasing public and parental awareness of the experiences children need to get ready for school.

4. <u>To Read More About The Role of the Family in Promoting School Readiness Refer to the Following Sources</u>

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C. EXPANDING THE SCOPE OF RESPONSIBILITY FOR SCHOOL READINESS: CHANGING THE WAY COMMUNITIES DO BUSINESS

Parents bring their children up in collaboration with a myriad of agencies and institutions whose policies and practices often diminish their efficacy. If families are to do a better job in preparing their children for school, then the social institutions in which they are anchored will have to change in order to be more responsive to families.

1. Perspective

In *Family Diversity and School Policy,* Barbara Lindner from the Education Commission of the States discussed three myths about the American family. These myths unwittingly led to the development of legislation and policies that diminished families' capacity to promote their children's readiness for school. The first myth, that of family independence, views families as the self-sufficient building blocks of society, having sole responsibility for providing all that children need. The fact is that, over the last century, many traditional family functions, particularly those related to economics and education have been assumed by other institutions. In addition, society's expectations about the needs and rights of young children have risen, making families increasingly dependent on outside experts for help in raising their young. As Kenneth Keniston points out in "The Myth of Family Independence," today's parents bring their children up in collaboration with a myriad of agencies and institutions in which they place their trust, but over which they often have little or no control.

The myth of separate worlds is closely related to the myth of family independence. This myth portrays the world of work and world of family as two distinct realms operating independently of one another. It ignores the fact that the way the family functions, and the early experiences parents are able to provide to children, depend on the hours, pay, and benefits the workplace provides to them.

The third myth is based partly on fact and partly on fiction. It places responsibility for how children develop with the families who nurture and socialize them. Research does indicate that the family *is* the most significant influence in young children's lives. However, what children know and understand about the world is not limited to what parents teach them. The myth of parental determinism makes it easy to blame parents when children aren't provided the experiences needed to start school ready to learn. It is, after all, easier to hold parents accountable, then to change the neighborhood, child care system, or health and medical community, all of which also influence children's development and views about the world.

Recent books and articles about changes in the American family are beginning to dispel the myths that have mitigated against the development of family-oriented policies. They almost universally acknowledge that factors outside the family affect its ability to nurture and rear its young; many even cite successful models of community change that have led to more effective family functioning. Still, they have only had a small impact on the institutions in which the family is anchored. In spite of the fact that neighborhoods, and the business, child care/preschool education/education, and health care communities know what they should do to be more responsive to families and children, most continue to conduct their business in the

usual ways. In the meantime, greater attention is being focused on the educational community and its responsibility to change.

Social policymakers now suggest that schools should no longer function "merely" as deliverers of educational services, but should broker multiple resources, guaranteeing children the physical, emotional, psychological, and family support needed to grow up happy, healthy, and smart. According to Lorraine Monroe, former Director of the Bank Street College Center for Minority Achievement, schools should become one stop, all-day, all-night shops that offer so many family services that they are vital to every family member.

While it is reasonable to expect schools to collaborate with other agencies on behalf of children, expanding the scope of their responsibility to families may be more than they can handle. Schools in Maryland are bound by a set of realities that place constraints on what they can do. Many are so overcrowded they hardly have space to carry out their educational functions. Principals are already overburdened with more responsibility and accountability than is reasonable to expect. Many teachers have their hands full just planning and providing instruction. With the state government restricting human services in order to prevent budget deficits, it is not likely that state funds will become available to turn schools into family resource centers.

Schools which have attempted to provide comprehensive services have learned that they, alone, cannot bear all the responsibility for the welfare of families and children. Accountability for children's development must be shared by all the agencies and institutions with which families interact. Because families are important to children, and social institutions are the lifelines of families, then modernizing institutions--the business, child care/education, and health care communities--so that they empower families to promote children's development must be viewed as important as changing the schools.

2. Changing Community Policies and Practices to Promote Children's Readiness for School

a. The Health and Medical Community

Children have the legal right to adequate health and medical care. Parents cannot provide the care directly, but rely on a complex network of public and private providers to do so instead. The policies and practices of these providers often prevent pregnant women and children from receiving the quality of care they need. Although family-oriented, continuity of care that focuses on prevention should be available to all children, for many, it is contingent upon parental knowledge and resources. As Lisbeth Schorr points out in *Within Our Reach: Breaking the Cycle of Disadvantage,* the health system works best with families who can monitor their own care, identify their own needs, and have the financial resources to obtain professional services.

According to the Children's Defense Fund, *Report Card, Briefing Book and Action Printer*, fewer pregnant women in Maryland received early prenatal care in 1987 than in 1978. Many medical experts believe that health care in the first trimester of pregnancy is the most important care of all. It enables medical and life-style-related problems that may endanger the health of the fetus to be diagnosed. If the care that is provided also meets accepted definitions of excellence, it can help

the expectant mother map out a plan for receiving pregnancy and childbirth management information and education for parenting.

At a time when intensive care, high-tech care, and specialists' care is mushrooming, many children are not receiving the basic health services needed and many parents are not getting the information necessary to promote their children's health. Preventive services are often non-existent or inaccessible to children whose families are indigent, unemployed, or among the working poor, because of the failure of insurance programs to cover preventive services, cost-containment policies imposed on public health providers, and lack of parental knowledge. According to the Mississippi Select Panel for Promotion of Child Health, education is the key, but national health policies provide little or no reward for activities that increase parents' understanding of the need for or nature of preventive health care.

The medical community lacks a family-orientation. Health and illness tend to be viewed as biological entities residing in individuals in isolation from their surroundings. As a result, children are often treated only for the symptoms for which they are brought to providers, while the non-biological causes of the symptoms, for example, family functioning, are overlooked. Even when such causes are recognized, few health and medical practitioners are organized to provide family outreach services. Thus, while preventive health care should identify and treat problems not exclusively biological, it often does not.

The fact that many children receive episodic care from anonymous providers compounds the problems. Continuity of care, or care by a provider who knows the child and his or her family well and is responsible for managing the child's health care over time, increases the possibility that problems will be detected and resolved early. When providers do not know the children they are treating or have access to their records, they must rely on parents for children's health and medical history, which increases the odds that the information they receive may be incomplete or medically inaccurate. In these instances, providers may lack the accurate information needed to provide preventive care or effective medical intervention.

The way the health and medical community operates, is organized, and reimbursed, makes it unresponsive to large numbers of families. Pregnant women and young children have a dire need for primary care that includes preventive services, education, and social support, but a disproportionate amount of resources are absorbed by dramatic cures, high-tech medicine, and urgent care. In order to improve services to families and children, health and medical providers need to focus more attention on the content of their services and to the familial context in which those services are provided.

b. The Child Care/Education Community

Parents need information and assistance in helping their children develop to their fullest potential, so that in addition to providing adequate care, they also educate their children in ways that prepare them for school. Children who start first grade without a background of experiences that promote their language and literacy development, stimulate their thinking and imagination, and

provide them with knowledge of the physical and social worlds, often have difficulty handling the expectations of a school curriculum which presumes their readiness to learn.

According to Gloria Rodriguez, Executive Director of the AVANCE Family Support and Education Program, schools, as currently structured, are not able to work effectively with large numbers of children who have had too few relevant experiences to be ready, willing, and able to learn. Despite their best efforts, schools cannot adequately compensate children who start school without knowledge, skills, attitudes, and dispositions they should have acquired in the first five years of life.

Young children need both care and education during the preschool period. In *Potentials of Childhood,* distinguished early educator, William Fowler, maintains that the education children need includes not only the informal, socializing experiences of the family, but also, planned provisions for intellectual stimulation that buttress their developmental potential and potential for learning. Whether preschool is provided as a part of child care or as a separate program, it should be a part of every young child's experiences. Moreover, it should be available to all parents who want their children enrolled.

Because the link between early education and later school performance is now commonly recognized, more parents are enrolling their children in preschool than before. Approximately 95 percent of all five-year olds in Maryland attend kindergarten, and in 1989, nearly 65 percent of all kindergartners had attended preschool. Those who attended preschool, however, tended to be from economically advantaged families, suggesting that the opportunity is less accessible to children from economically disadvantaged homes.

Children do have unequal access to preschool opportunities. It is least available to those who stand to benefit the most: children living in poverty and/or families in which parents are undereducated. In 1987, the preschool enrollment rate was 29 percent for families earning below $10,000 per year, 26 percent for families earning below $20,000, 64 percent for families earning between $20,000-$25,000, and 75 percent for families earning $25,000 or more. Viewed from the perspective of parents' educational attainment, the enrollment rate was 23 percent for children of dropouts, but 58 percent for children of college graduates. When minority children are enrolled in programs outside the home, they are disproportionately enrolled in custodial care. In contrast, Caucasian children are more often enrolled in programs with a substantial education component.

In addition to differential availability, a new problem has emerged in regard to preschool access. The policy of targeting publicly-supported programs to those most in need has created a two-tier system that legitimizes the segregation of children and families by social class. Though well-intentioned, the policy sanctions economic segregation by sending preschoolers from middle- and upper-income families to fee-for-service programs and children from low-income families to subsidized programs. This kind of economic segregation often leads to racial segregation as well, isolating minorities from the mainstream culture to which they legally have the right to equal access.

A growing body of research indicates that early education can make a significant difference in the lives of children and families, particularly those living in poverty. Nonetheless, the benefits of preschool depend on the quality of the program. The most successful programs have low staff-child ratios, use developmentally appropriate curricula and methodologies, are carefully monitored and supervised, provide for staff development and parent involvement, deal with children in the context of their families and communities, and ensure continuity of learning and children's continuous progress through the primary grades. As Owen Butler, retired Chairman of Proctor and Gamble, has pointed out, effective preschool programs build in quality from the outset via standards or criteria that exert tight control over program implementation.

Poor quality programs predominantly fall into two categories: child care that lacks a substantial education component and prekindergartens/kindergartens that are watered-down versions of first grade. When intellectual development is confused with academic achievement and early childhood education is confused with formal schooling, programs that were intended to reduce developmental risks actually increase them. Such programs do more harm than good.

Early childhood experts generally agree that a consistent set of standards should be used to evaluate preschool programs, regardless of their sponsorship, ensuring all families quality within a diverse system. The reality is that families have unequal access to high quality programs, although no single factor can be targeted as the cause. A number of variables interact to produce a system that is uneven in excellence. Most programs are subject to standards, but the standards vary widely in the thresholds established and programmatic areas regulated. Agencies responsible for administering programs often lack the staff to monitor them or to provide on-site technical assistance to strengthen program implementation. Additionally, parents may exert pressure on program staff to provide an academically-oriented program. Any or all of the causes produce the same outcome. The distance between what constitutes quality and what is implemented from program to program is vast. High quality preschools are not guaranteed to all children whose education is supplemented in nonfamilial settings.

Nearly 59 percent of the mothers of three to five-year-olds are employed outside the home on a full-time basis. In contrast, most Head Start and public school prekindergarten and kindergarten programs operate on a half-day basis. This puts families in the position of having to choose between full-time care that may not have a strong education component or half-day preschool coupled with half-day care. The latter alternative may not be an option at all if transportation is unavailable to take children from one setting to the other. The latter may be a poor choice if preschool and care providers do not collaborate to ensure that children's total day is balanced and meets all their developmental needs. Still, early childhood education and child care providers are not accustomed to cooperating to promote program integration. Parents can only hope that the two settings together provide their children education, nutrition, rest and play, and daily outdoor exercise.

Young children need consistency and continuity in their daily lives. They also need daily experiences that meet all their developmental needs. Multiple caregivers, frequent transitions, and fragmented days have adverse effects on children. The dual and separate systems of care and edu-

cation which occupy adjacent, but often not complimentary, territories on the conceptual map of services to families, fail to view children holistically and can create a myriad of logistical problems for parents who need or want to work.

c. *The Business Community*

Young children need supportive parents who are able to care for them in sickness and health. Employers require reliable workers who arrive on time, don't miss time, and meet deadlines in a timely manner. In order for adults to effectively fulfill the responsibilities inherent in being both a responsible parent and productive worker, the business community needs to develop family-oriented policies that integrate home and work. Some businesses in Maryland have begun to do this, but for every company that offers help to working parents, hundreds more do not.

Over the last decade the number of medically uninsured children has increased 40 percent. Falling into this group are not only children of the poor and unemployed but, also, children with working parents. As parents are laid-off and re-employed at lower paying positions, and as businesses curtail fringe benefits to current employees, health insurance coverage is often reduced. One result is that workers may be covered, but their dependents are not. In response to this problem the American Medical Association recently backed a national proposal requiring businesses to provide health insurance to all employees and their families. A proposal submitted to Governor Schaefer by the Commission on Health Care Policy and Financing is similar, but excludes coverage for dependents. If adopted, the Maryland package would ensure basic health services, such as prenatal care, to all working women. However, the plan would continue to make access to medical care a major problem for the children of working parents.

The availability of affordable, regulated child care is a pressing issue for many working parents in Maryland. In 1986, the number of regulated child care programs was sufficient to meet only half the demand, while care for infants and for sick or disabled children reached near-crisis proportions. What child care is available does not come cheap. According to the Maryland Committee for Children, the average cost of full-time care is around $4,000 a year--the fourth largest expense following housing, food, and taxes. For parents earning minimum wages, child care costs significantly reduce the family's standard of living. For all parents, the cost of child care, coupled with the costs of transportation, parking, clothing, and meals, raise questions about the financial benefits of going to work at all.

In order to compete for workers in a limited, qualified labor force, the business community must become more responsive to their familial needs. Some businesses have begun to offer child care assistance as part of their employee benefit package, although in Maryland, progress has been very slow. The health professions have taken the lead in child care. Of 23 businesses that now offer employer-supported child care programs, ten are hospitals, while only two fall into the category of private business and industry.

In addition to dependent health insurance coverage and child care assistance, working parents benefit from flexible work schedules and liberal leave policies. Parents may need to take time off to

nurture a newborn infant, take children to the doctor, care for them when they are sick, or participate in their preschool education--all of which are essential parts of parenting. Part-time or flex-time schedules, job-sharing, working at home, telecommuting, and liberal leave policies give parents the time to provide children with experiences vital to their development. Nevertheless, only 60 percent of businesses nationwide provide any maternity leave at all, and only 13 percent have adopted flexible work schedule policies.

In the next decade an even greater proportion of parents with young children will seek employment outside the home. As this occurs the business community will have to take familial needs into account. Recent research on the linkage between work and family indicates that family-oriented policies increase employee productivity and reduce absenteeism and tardiness. Beyond this, common sense suggests their contribution to the development and preparation of the next generation of workers.

d. Neighborhoods

Just as children cannot be regarded apart from their families, families must be understood in the context of their environment. The values and expectations of home may be reinforced or contradicted by the neighborhood in which the family lives. The neighborhood may or may not support the family's need to promote their children's development, but it does provide children with their first glimpse of the world outside of home and contributes to their sense of optimism or hopelessness about their place in it. From their experiences in their immediate surroundings, children construct a vision of the future, and judge whether that future requires or rewards effort and achievement. In this way, neighborhoods influence children's readiness to learn.

Since children's readiness for school is affected by where they live, the community shares partial responsibility for how children develop. Accepting this responsibility means that neighbors must join forces and take action to promote the health and welfare of children. Neighborhoods, rather than being enclaves where people live and work in close proximity but remain isolated from each other, should be places where families, businesses, institutions, and agencies collaborate and advocate on children's behalf.

While collaborations can be forged by any community member or agency, a number of reformers argue that the school, because it serves all children, is the most strategic agency to spearhead action on behalf of children. In this view, the school should take the lead by forming a Home School Community Council that represents all constituencies in the community, including families, businesses, churches, and health and human service providers. Once formed, these councils should mobilize and integrate existing resources and generate new ones to ensure that families can provide what is needed for children's optimal development.

Experts agree that community coalitions are most successful when they reflect the unique characteristics, concerns, and needs of the neighborhood. The most effective councils, however, do have some common characteristics. Usually, they employ someone from the community on a full-time basis to facilitate their child advocacy work. They also secure commitments for support from

key officials and political leaders and concentrate on issues relevant to all community residents. All Home School Community Councils deal with children in the context of their families, focusing on promoting parental self-sufficiency in meeting children's needs. They offer intervention, providing high-risk families with a wide array of services or an easy entry point to services delivered in a coherent, sensitive manner.

The way in which a Home School Community Council operates varies by community, but councils usually move through four important phases. In the first phase, they draft a statement describing what the community views as the fundamental rights and needs of its children. The statement is specific enough to give direction to planning and action and reflects an awareness of the experiences that are fundamental to development in the first six years of life.

The council's "Bill of Children's Rights and Needs" serves as the standard against which home and community are assessed. In the second phase, council members gather data on children's needs and the community services that are available to meet them. They also collect information about the background and economic status of families, health and nutritional status of children, quality of home and community environments, children's preparedness for school and history of educational progress, and the accessibility and effectiveness of community resources and services. Once the data has been collected and analyzed, the council sets priorities for responding to families' unmet needs. In the third and final phases of child advocacy, the Home School Community Council develops new strategies or generates new resources for improving the condition of children. It also develops a system of accountability, ensuring that new forms of family support contribute to more effective family functioning.

Efforts to promote family efficacy and ensure the well-being of children must begin at home. Nevertheless, each community offers a unique setting with unique opportunities for strengthening children's early learning environment, protecting their rights, and enhancing child, maternal, and familial development. In order to take advantage of these opportunities, neighborhoods must recognize their power to define and achieve their goals for children and families. By helping themselves, neighborhoods not only improve children's destinies but, also, assist children's growth in a way that promotes their own prosperity. In the long run, their strength only lies in the strength of the families of which they are comprised.

3. Recommendations

The Health and Medical Community

1. The Department of Health and Mental Hygiene, Maryland Chapter of the American Medical Association, and private health providers should collaborate to develop a system enabling all women to receive pregnancy testing and if pregnant, initial prenatal care, regardless of her medical benefits or ability to pay. As part of the initial visit, counseling and referral services should be provided.

2. The Department of Health and Mental Hygiene should establish a central data base that tracks the health and medical status of all 0-5 year old children living in Maryland. Children should be entered

into the data base at birth or within 90 days of becoming a Maryland resident. The data base should be accessible to all health and medical providers statewide.

3. Every hospital and childbirth center in Maryland should issue a medical passport to parents of newborn babies that lists the preventive health care needed in the first five years of life. As the care is provided, it should be indicated on the passport by the attending clinician. A completed passport should be required as a condition for starting first grade.

The Child Care/Education Community

4. The state should provide funds for public school prekindergarten expansion until all four-year olds whose parents want them enrolled are served.

5. In the absence of adequate space to provide prekindergarten in the public schools, each local school system should have a cadre of certificated teachers to provide it in group child care facilities. Any program provided off-site should be subject to the same regulations and standards as school-based prekindergartens.

6. As part of prekindergarten and Head Start recruitment, each school and Head Start center should actively locate and enroll children whose developmental assessment at age three resulted in a "high priority" rating.

7. Each local school system or school should use a combination of public and private funds to link its half-day prekindergartens and kindergartens to half-day programs of child care. Child care and education providers should collaborate to ensure that children's full-day program is balanced and meets their need for play, rest, education, and nutrition.

8. As part of providing bus transportation to prekindergarten and kindergarten children, each local school system should make provisions that enable them to be picked up or dropped off at their day care providers.

9. The Maryland State Department of Education should require all prekindergarten and kindergarten programs to meet standards of quality as identified in the document, *Standards for Implementing Quality Prekindergarten Education* and *Kindergarten Supplement.*

10. All programs that serve four and five year olds should be required, by law, to meet standards of quality as determined by the National Association for the Education of Young Children and/or the agency that administers the program.

11. Child care/preschool program facilities should be a part of all new public building remodeling projects, including public school construction.

The Business Community

12. All employers in Maryland should be required, by law, to provide health insurance to all their employees and their dependents.

13. All state agencies should serve as models for the business community by expanding their provision of employer-supported child care and parent education programs.

14. The Maryland State Department of Education should form a coalition with representatives from business and industry to develop guidelines for helping businesses institute family-oriented policies and practices.

Neighborhoods

15. Each school or group of schools serving the same community should form a Home, School, Community Council comprised of parents, churches, and representatives from various agencies and businesses, including the school. The Council should function as an advocate for families in the community, securing the resources and services they need to promote their children's development.

16. In order to provide for parent education, community action, and business and industry responsiveness to parents and children, a Home School Community (HSC) worker, should be assigned to each school or group of schools. In assigning HSC workers, school size and community characteristics should be considered.

4. To Read More About The Role and Responsibility of Social Institutions Refer to the Following Sources

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D. ASSESSING SCHOOL READINESS

Children's preparation for school, as determined by their pre-first grade experiences and levels of functioning, should be routinely monitored and periodically assessed throughout the preschool years. When necessary, assessment findings should be linked to intervention that addresses developmental problems and/or unmet needs and ensures that children start school with the knowledge, skills, attitudes, and dispositions necessary to meet with success.

1. Perspective

If children need a lifetime of experience to start first grade ready to learn, then waiting until first grade to assess school readiness precludes intervention and prevention. Families, along with the human services providers on which they depend, should routinely monitor children's growth and development during the first six years of life. Assessment results should lead to action carried out to address children's unmet needs and/or treat their identified problems. Unless linked to intervention, assessment is useless and may even be detrimental.

CRITICAL POINTS IN ASSESSING 0-5 YEAR OLDS' PREPARATION FOR FIRST GRADE

Nature Of Assessment

Medical visit	Child health registry (on-going through age 6)	Developmental assessment	Experienced-based profile	Screening based on teacher observation	Performance-based assessments (pre-MSPP outcomes)
♦♦	♦♦	♦♦	♦♦	♦♦	♦♦
FIRST TRIMESTER OF PREGNANCY	BIRTH	3 YEARS OLD	KINDERGARTEN REGISTRATION	KINDERGARTEN YEAR	GRADE 1
Treatment and counseling; referral, if needed	Preventive health care and treatment of problems	First priority for prekindergarten education, if needed	Program accommodations and community outreach, if needed	Plans for additional support in first grade, if needed	Starts first grade ready to learn; meets with first grade success

Outcome

Assessment should be initiated and/or conducted at five critical points in the formative years: in the first trimester of the mother's pregnancy, at birth, around three years of age, when children are registered for kindergarten, and during kindergarten. Each assessment should provide the widest possible view of children's functioning and take into account their home and out-of-home environments. Additionally, each assessment should yield information that can be used to make practical decisions about appropriate follow-

ups. Assessment results should enable relevant parties to correct problems that are inherent within the child, as well as address problems in the environment that diminish the child's development.

Head Start and state-funded prekindergarten programs were specifically established to serve at-risk children. Their rolls include children whose families meet low-income guidelines (Head Start) or live in the attendance area of Chapter I eligible schools (public school prekindergarten). The error these selection procedures make is that they presume that poverty alone predisposes children to be unprepared for school. Research indicates that income level does not predict school performance on an individual basis. Eligibility for subsidized preschool should, therefore, be determined by alternative means--namely, children's level of functioning. All children should receive a growth and developmental assessment shortly after their third birthday. Those whose results indicate the greatest developmental need should be given first priority for enrollment in publicly-funded preschool, regardless of their family's economic status.

The school, being the only institution that reaches all children prior to first grade, should conduct a readiness assessment when they are registered for kindergarten. The premise directing the nature of this assessment should be that specific clusters of experiences promote children's acquisition of particular characteristics that are the foundation of school readiness. What first needs to be determined is whether children have had the experiences. In order to assess children's background of experiences, their parents or guardians may be asked to complete a questionnaire profiling their own background characteristics, and their children's health, medical, care, and educational experiences beginning at birth. Parents or guardians may also be interviewed, enabling the school to gain insight into the values, expectations, and childrearing patterns that informed them during the child's early years.

Experience-based assessments should benefit families directly. The results should thus be used by school staff for three purposes. Findings may serve as the basis for program planning, accommodating kindergarten to the experiential needs and cultural backgrounds of children. Results may also help in collaborating with other agencies to secure resources such as adequate housing, food, and health services which a family needs to promote its child's optimal development. Finally, the data can help to identify the needs of families and children in the school community as a whole, for which resources may be mobilized or generated to improve the quality of life for all children.

While experience-based profiles can tell whether children have had the experiences that promote their readiness for school, they do not indicate whether children have actually acquired the knowledge, skills, attitudes, and dispositions needed to start first grade ready to learn. Readiness tests are often used for this purpose. As Shipman points out, however, many of the items on readiness tests bear little relationship to first grade achievement. By being skill and pencil-and-paper-based, they do not assess physical, social, and emotional factors that influence children's ability to benefit from formal learning. Being administered at only one point in time, they disregard natural fluctuations in children's knowledge and performance. In addition, readiness tests do not take into account situational variables that enhance or diminish children's capacity to learn.

According to Fedoruk, Keogh, Davidson, and Weintraub, a child's readiness for first grade is determined by the extent to which his or her entering characteristics and capabilities match the curricular, methodological, and teacher expectations of the first grade program. Any assessment of children's school readiness should

include items that are specific to the program in which they will be enrolled. Additionally, the methods used should offer children multiple opportunities to demonstrate what they know and can do.

Assessment of children's attainment of readiness behaviors should be used to identify those who may need additional support in first grade. It should not be used to retain them in kindergarten or assign them to transitional programs. Using readiness assessments to delay children's access to the educational mainstream, Meisels points out, blatantly violates the concept of developmental differences. It is antithetical to children's legal and constitutional rights to a free and appropriate education, and incompatible with the philosophy, theoretical foundation, and best practices on which early learning programs should be based.

2. Recommendations

1. Parents should be required to take their children for a developmental assessment on or around their third birthday. Based on the assessment, children's need for preschool education should be indicated using a three point rating scale such as "high priority (1)", "would benefit (2)", and "development is typical for age (3)". All children receiving a "high priority" rating should be given first priority for enrollment in a public school prekindergarten or Head Start program.

2. When children are registered for kindergarten, each local school should assess their background of experiences. Assessment results should be used to obtain resources that a family needs in order to enable its child to start first grade ready to learn and as a fact base for working with the community to improve the quality of life for all children and families.

3. The Early Identification and Intervention Program (EIIP) should continue to be used to screen children for their readiness to start first grade ready to learn. In order to ensure that EIIP effectively detects and ameliorates learning problems, the Maryland State Department of Education and local school systems should:

   - revise the Maryland Observational Screening Checklist for Kindergarten (MOSCK) so it meets technical standards for a screening instrument, particularly those related to the validity of the items in assessing variables related to first grade readiness,
   - review the criteria on the EIIP Recommendation Sheet so that they more adequately assess variables associated with first grade success,
   - streamline the Review and Evaluation process while still ensuring that children identified as at risk are further assessed and provided timely interventions that match their needs and/or address the causes of their learning problem(s),
   - develop a list of indicators to be used by schools when further assessing at risk identified children. The list should enable assessors to identify and address both the child's deficiency(ies) and its (their) causes. The indicators should include within-child variables that affect first grade performance as well as school, home, and community factors that also affect the child's performance in school, and
   - develop and institute procedures for monitoring and documenting the impact of interventions.

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III. EARLY LEARNING PROGRAMS: YOUNG CHILDREN IN SCHOOL

A. PROGRAM STAFF: QUALIFICATIONS AND DEVELOPMENT

In order for early learning programs to be appropriate and effective, individuals who administer, supervise, and implement them must possess a background of knowledge and skills in early childhood/child development and an awareness of current research and thinking in the field. Human resource development should be an uncompromised part of every local school system's early learning program, affording central office and school staff opportunities and multiple and diverse means to increase their proficiency in providing high quality education for 4-9 year olds.

1. Perspective

Early childhood education is a multi-faceted, multi-disciplinary field that spans two periods of human development and is guided by theories, research, and craft knowledge about how children ages four through nine develop and learn. Significant advances in research and craft knowledge over the last 15 years have enabled the early childhood community to formulate policies and practices that characterize appropriate and effective education for young learners. Those policies and practices can not be put into place, however, until early learning program providers know what they are and understand the theories and research findings from which they emanate. An issue on which public policy and professional organizations such as the National Association of State Boards of Education, National Association of Elementary School Principals, and Rutgers Center for Policy Research in Education, unanimously agree is that those who plan, administer, supervise, and implement programs for young learners should have broad expertise and demonstrated proficiency in early childhood education.

Improving early learning programs requires that policymakers, school administrators, and teachers understand the essential differences between schooling for younger and older students. For many educators in Maryland, particularly those functioning in administrative and supervisory capacities, early childhood is new unfamiliar territory, and for many teachers, recent research findings that justify changes in practice still lie outside their knowledge domain. Fullan, Joyce, Day, Shanker, and Schlechty, all leaders in the area of institutional and professional development, believe that states and school districts that mandate school improvement without building in means for improving workers' knowledge and skills will never achieve their goals. In their view, human resource development is the key to long lasting program reform.

Current literature on human resource development distinguishes between staff development, a strategy for increasing educators' knowledge and skills as a group, and professional development, a process by which individual educators improve in self-determined areas and by self-selected means. Professional development, defined as the on-going, incremental process of attaining new levels of understanding and proficiency through reflection on one's performance, critical inquiry into the best thinking in one's field, and dialogue with others, is based on three premises. The first is the belief that every educator has the right and ability to decide what information (s)he needs to do his or her job more effectively and/or to attain his or her professional goals. The second is that professional development presumes that job satisfaction, commitment, and performance are likely to increase when educators are allowed to solve problems of professional relevance to themselves, and are able to function as knowledge specialists rather than as subordinates.

The third premise is that school programs will improve when all employees are allowed to develop professionally. Each level of the educational system, therefore, has the responsibility to promote the growth of its staff.

The essential elements of professional development are indicated by both research and practical experience. To begin, the school system must sanction professional development through a written policy that identifies its purposes, goals, and relationship to the attainment of the system's mission. Next, the school system must create conditions favorable to it. According to the September 1990 issue of *Educational Leadership*, local schools should offer many options and opportunities so that individuals can choose those that suit their purposes, learning style, and career. When opportunities are offered, they must be firsthand, available during the regular workdays, free of cost to the participant, and relevant to the participant's needs, interests, or goals.

In contrast to professional development, staff development is deliberately intended to encourage collective growth in a common direction. As one form of professional development, in-service training can increase participants' theoretical or procedural knowledge, help to change their perspectives, and enable them to examine the assumptions on which they operate. It is unlikely to lead to changes in practice unless it is relevant to participants' perceived needs, sufficiently intense, specific, and concrete to build participants' competence, and cognitively oriented; that is, unless it teaches not only how to do something, but under what circumstances and why. Staff development must be connected to participants' professional lives or it will only be an interesting experience at best.

Based on a meta-analysis of over 200 research studies and extensive reviews of the literature, Showers, Joyce, and Bennett identified five elements that will result in changes in performance if combined in staff development programs. First, the entire period from introduction to institutionalization of a new concept or practice should include training. Second, new concepts should move systematically from theory to demonstration to application. The third and fourth elements are the most important and most neglected. Joyce, Stallings, Pomfret and Little, and Huberman have shown that participants must have opportunities to try out the practice or concept and receive non-judgemental feedback about their performance. Fullan and Joyce further found that efforts at innovation must unfold in an environment of support characterized by trust, continuity, shared problem solving, and experimentation. Finally, effective staff development must provide time for participants to reflect on the concept or practice, and in so going, make it their own.

Like professional development, staff development should be an uncompromised aspect of school and school system operations and written into policy. It should be included as a line item in the budget, reflect sound principles of adult learning, and focus on increasing educators' knowledge and skills. Unlike professional development, staff development must be directly linked to the school or the system's goals for improvement. While its effectiveness depends on its relevance to the needs of individual staff members, it must have a visible impact on the quality of the school program in order to be justified.

Professional development, including staff development, is essential to program reform. Despite all the attention it is currently being given, school-based professional development is not always a panacea. It does have the advantages of being able to be tailored to the specific needs, problems, and priorities of the school and staff and, also, of evolving in a setting where social cohesiveness and interpersonal dimensions are readily fostered. For example, researchers at the Bank Street College of Education conducted an inten-

sive study of successful elementary schools in New York City during the 1989-90 school year. What they found was that staff in the most effective schools know how young children develop and learn, measure every dimension of school life against the yardstick of appropriate practice, and use professional/staff development to improve dimensions that don't measure up. Such staffs put a high premium on working together to acquire new knowledge and in translating that knowledge into "child-appropriate" practices.

Bolington and Hargreaves found the school-development model of professional growth that is used in successful elementary schools to be effective in institutionalizing norms of experimentation and collegiality, increasing staff's sense of efficacy, and improving the school program. The model has three steps. The first step involves gathering data by means of self-study and using the data to develop a written plan that identifies improvement goals in concrete measurable terms. In the second step, goals are prioritized and each staff member determines how (s)he will contribute to the improvement effort. Professional development goals are analyzed to ensure that they are coherent, coordinated, and realistic, and then, also, written into the improvement plan. As the last step, staff members identify how they will achieve their goals for individual and institutional improvement.

The effectiveness of the school-development model of professional growth depends upon the principal's support for adult learning. Principals who accept responsibility for the development of their staff use the knowledge and skills staff already have and those they need as a starting point for encouraging their further growth. The National Association of Elementary School Principals maintains that the role of the principal is to enable staff to participate in development experiences both within and outside of school. According to the Association, staff should be allowed to attend professional meetings and workshops, visit other early learning programs, and consult with experts in the central office, state department of education, universities, other agencies, and business. They should be encouraged to learn with and from each other.

Glatthorn and Pajak, and Glickman, suggest that, collegial groups, consisting of two to six people, offer a formal structure for collaborative learning and professional growth. Such groups usually take one of five forms, all of which are based on cooperation and dialogue. Study groups explore an issue relative to early learning programming. In the process they review and critique the literature, identify and discuss their own experience-related knowledge, and draw conclusions about the actions the school should take. Curriculum-focused groups work out the logistics of operationalizing the school system's curriculum at the school level. In the process these groups investigate the current literature on best practices for teaching and learning in the content areas. Through collegial consultation and peer coaching, school staff help each other acquire a command of new practices. Finally, action research groups enable staff to identify a problem that has direct relevance to them and use the school as a laboratory for developing workable solutions.

By themselves, schools cannot provide all that faculty and staff need to grow and improve. System- and state-level initiatives must provide a counterpart to school-based professional/staff development. The National Association of State Boards of Education and National Governors' Association assert that state departments of education and local school systems are responsible for producing and disseminating information about research findings and best practices, creating opportunities for educators to talk with and learn from one another, enabling school staff to benefit from the on-site support of specialists and supervisors, and providing in-service training.

Print materials and technology are an efficient means for exposing educators to a broad base of knowledge. Videotapes as well as procedure manuals codify effective and appropriate practices. Videotapes provide strong visual images of what theory and research look like in practice. Computer networks, such as the Instructional Frameworks developed by the Maryland State Department of Education, give educators immediate access to current research and "best" practices. Assuming that craft knowledge is an important resource for professional growth, newsletters make it possible for a wide audience to benefit from the wisdom and experience of practitioners. All four strategies have the advantage of being timely--they can be accessed whenever needed.

When advocacy for change originates with successful practitioners, it gains in credibility. Teacher centers, or facilities where teachers meet for training, consultation, or to develop materials, and teacher support networks, or sites where teachers observe and try out new ways of doing things, have been shown to stimulate thinking about and create enthusiasm for change. The demand for these professional development opportunities currently exceeds the supply. Baltimore and Anne Arundel Counties operate the only known early childhood teacher centers. The Maryland State Department of Education operates field experience sites exclusively for prekindergarten and kindergarten teachers.

Sam Yarger, Dean of the School of Education at the University of Wisconsin-Milwaukee, analyzed the strengths of teacher centers which flourished for a brief period in the 1970s. He maintains that such centers incorporated characteristics that are essential to successful in-service programs, but which are missing from many staff development efforts today. The centers were responsive to teachers' needs; they focused on improving practice, were capable of addressing individual and small group concerns in a timely fashion, and provided a broad array of support services ranging from in-service training to one-on-one consultation. The centers enabled teachers to speak openly about practical problems and seek solutions through sensible advice from colleagues. According to Yarger, no in-service program before or after has been as successful as teacher centers.

Joyce, Weil, Waid, Brown, Reid, and Showers have shown that demonstration, guided practice, feedback and reflection support the successful application of theory to practice. Baker and Showers demonstrated that teacher teams can help each other by sharing methods and results and by observing one another in risk-free settings. The Early Learning Support Network, operated by the Maryland State Department of Education, incorporates all these elements. At field experience sites a teacher interested in learning a new practice observes and is coached by an expert trainer, and then works with the trainer to develop a plan on how to incorporate the new strategy into his or her classroom routines. Initial evaluations of this professional development project indicate that it has been quite effective in promoting the wider use of developmentally appropriate practices in prekindergarten and kindergarten programs.

Very little has been written recommending system- or state-wide staff development projects, presumably because those projects have a history of providing training that is too weak to result in significant professional improvement. However, one should not conclude that projects should not be attempted on the basis of past failures; rather, they need to be undertaken in dramatically different ways. The practice of providing staff development as a series of uncoordinated, one-shot training sessions does not work. Staff development delivered in the form of "mini-sabbaticals," built around the needs of the system or state as a whole, offers greater promise.

In *Time For Results,* the National Governors' Association addressed concerns about the knowledge and skills of school administrators by recommending that school systems create training programs for them in collaboration with colleges and universities, businesses, and/or state departments of education. Increasingly, educational jurisdictions are establishing state or regional academies that offer mini-sabbaticals lasting from one to eight weeks, for which principals and central office personnel are frequently the target audience. Academies remove principals and central office personnel from their daily job pressures, enabling them to focus on acquiring the knowledge, research, principles, and practices that characterize education at a particular level. Such academies offer four qualities that many in-service programs for principals and supervisors usually lack: intensity, relevance, peer support, and a focus on application to each administrator's professional context.

Rosenholtz defines collaboration as the act of sharing responsibility for improvement by engaging in help-related exchanges. Results from a recent survey conducted by Western Oregon University indicated that school superintendents would like to have more assistance with human resource development and significantly more cross-school, cross-system, and/or cross-agency collaboration. In an educational field where funds for human resource development are meager, and at a time when education budgets are becoming increasingly lean (but school reform is still expected), forging new professional/staff development linkages becomes a necessity. Cross-system and cross-agency collaboration facilitates the efficient use of resources and gives early learning program personnel the professional development opportunities that their agency, alone, would be unable to provide. Collaboration promotes the cross-fertilization of ideas, expands participants' perspectives, and exposes personnel to a wider variety of solutions to programmatic problems. Cross-system and cross-agency collaboration helps early learning program personnel see themselves as part of an early childhood ecosystem in which the exchange of ideas is essential to the quality of its programs.

A human resource system in education should enhance educators' technical knowledge and skills, allow them to work together to improve their schools, and help to achieve the school system's goals. Universities and colleges can assist school systems in all three areas, but it will require these agencies to relate to each other differently. Traditionally, the university has served in a research and training capacity for schools. Today, according to Richard Arend, from the University of Maryland, school systems and schools determine the kind of support they need from universities, and assistance is largely focused on school practices and problems.

Partnerships between school systems and institutions of higher education (IHE), such as those between the University of Maryland and surrounding school systems in Maryland and Virginia, operate on the premise of mutual benefit. Schools and school systems benefit from the staff development, consulting services, and research support IHE experts provide. IHE faculty benefit from observing the educational process unfold in the real world of classrooms, and from having real-life settings for investigating their ideas and theories. The partnerships themselves rarely evolve or need to evolve in formal, rational, or linear ways. Ann Lieberman, from the University of Washington, points out that some of the most effective campus-school liaisons have begun as small, informal initiatives, when a small group of activists from the school and university wanted to try a new approach. For productive linkages to be established, it is important that IHEs and school personnel talk with each other about the meaning and direction of early learning program reform.

Successful business practices have shown that organizations cannot leave to chance the professional development of their central personnel, and the education field should have learned from their example. Successful businesses allocate approximately 7 to 10 percent of their annual operating expenses to professional/staff development, while the typical educational agency allocates less than 0.5 percent. In some small school systems, professional/staff development may not figure in the budget at all. Considering how critical human resource development is to educational reform, when public commitments to educational improvement are made without increasing funds for professional/staff development, most educational reformers view the promises as rhetoric without substance.

In her preface to *Changing School Culture Through Staff Development,* Madeline Hunter writes that it is inexcusable for school administrators or teachers to violate educational principles that have been established by research. Nonetheless, early learning program teachers who are unfamiliar with new research findings cannot be expected to initiate new practices, and school administrators for whom early childhood education represents new territory can hardly be expected to fairly evaluate--or support teachers trying to implement research-guided practices. At the same time, all young children in Maryland have the right to educational programs that are developmentally appropriate and that promote their success in school. Without qualified staff who have on-going opportunities to learn and grow throughout their professional careers, the most well-intentioned programs are doomed to failure.

2. Recommendations

1. Central office staff who plan, administer and/or supervise programs for four through six year olds should or be certified in early childhood. Principals should have, or be required to obtain, within two years of their appointment, documented knowledge and expertise in early childhood including human development, learning theory, and educational programming related to children ages four through nine.

2. Each local system should develop and disseminate a written policy on professional and staff development that articulates its position, identifies the target audience(s), and delineates the parameters in which both staff and professional development are to be promoted or pursued.

3. In order to use their resources more efficiently, local school systems and schools should collaborate with each other and with other early childhood education/care providers in sponsoring professional/staff development.

4. Each local school system should base its systemwide staff development agenda for early learning program personnel on needs that are common to many programs as determined by an analysis of schools' improvement plans. Systemwide staff development should increase schools' skill in addressing issues unique to early learning programs such as interagency collaboration, full day care/education, and comprehensive services.

5. As part of its improvement plan, each school should identify the focus of professional development and the methods and resources that will be used to link professional development to its improvement plan.

6. The Maryland State Department of Education should increase its efforts to ensure that early learning program personnel have the knowledge and skills needed to provide high quality programs. Increased efforts should take the form of re-instituting previous strategies such as the early childhood newsletter; expanding current strategies such as Project Better, the Early Learning Support Network, and regional teacher centers; and implementing new strategies such as developing a videotape library and sponsoring principal and/or teacher academies.

7. A one and one-half percent commitment of the state's aid to education budget, in the form of new monies, should be designated for professional/staff development.

8. Implementation of the Early Learning Years Commission's recommendations should be field tested in pilot schools which should then serve as demonstration sites to local school systems and schools.

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B. HOW EDUCATION SHOULD BE DELIVERED IN THE EARLY LEARNING YEARS

To become more responsive to differences among learners at various stages of development, schools should be restructured, creating an early learning bloc that encompasses 4-9 year olds. Within the early learning bloc, organizational strategies such as multi-age groupings and primary units which span more than one grade can be used; such strategies promote consistent adult-child interactions over time and enable children to work at their current performance level and progress at their own pace, regardless of age or grade. Additionally, mixed age, mixed-ability groups prevent the labeling and tracking of children before their development has evened out or they have had opportunities to succeed. They benefit children by providing contexts for peer interaction in which a variety of models of behavior and levels of social, intellectual, and academic competencies are available.

1. PROGRAM ORGANIZATION

a. Perspective

Program organization establishes how four-through nine-year-olds are grouped for teaching and learning and the size of the groups that are formed. On the surface, organizational strategies only seem to play an administrative role by helping schools manage their diverse populations of students. Closer examination, however, reveals that both grouping practices and group sizes can affect children's opportunities to learn and, in turn, their development and educational attainments.

The three most frequently used grouping practices in Maryland's elementary schools are: sorting children into grades by age; organizing grades into classes that are mixed in terms of ability; and, within each class, forming groups on the basis of ability for instruction in reading and math. Grade and ability groupings are potentially discriminatory since they can deny or impede children's access to knowledge on a differential basis. The grade-by-age organization of schools when coupled with a curriculum defined by grade, can set floors and ceilings on learning. Faster learners are unable to progress at rates in line with their abilities and/or performance, while slower learners are labelled, and often penalized, for not keeping pace.

Grouping students by ability can influence teacher expectations and lead to inequitable opportunities to learn. There is evidence that Maryland's primary grade teachers expect less of children in the bottom groups. If these children are aware of their status, they may fail to acquire the self-esteem and self-confidence that are critical to learning success. Lacking both, they may lose motivation, perform poorly, and fulfill their teachers' low expectations. Grouping on the basis of ability, therefore, may actually promote the lower achievement of children at the bottom.

Research by Slavin, Leinhardt and Palley, Winn and Wilson, and Good, among others, documents that ability grouping does more harm than good. Children in the high groups often overestimate their worth and abilities. Children in the low groups feel unworthy and incompetent. Oakes found that children in the bottom groups often receive an inferior education. The content of their learning is watered-down, unchalleng-

ing, and material-scarce. Their educational program is decidedly not remedial. Once children are placed at the bottom, which usually takes place in kindergarten, instruction provides them little chance for upward mobility.

Retention, a permanent form of re-grouping children who fail to meet grade level expectations or who are immature, can be as detrimental as ability grouping. Many studies have shown that retention in the early grades bestows no achievement benefits and has negative effects on children's self-concept, psychosocial adjustment, and attitudes toward learning and school. According to Shepard and Smith, children who fail rarely receive program modifications to ameliorate their weaknesses. Without changing what didn't work in the first place, permanently segregating children from their regular peer group and placing them with younger children often results in negative consequences with ramifications that can last a lifetime.

In July, 1990, the National Education Association (NEA) joined the National Governors Association in calling for an end to ability grouping and tracking. As NEA pointed out, however, ability grouping is often a well-intentioned effort to reduce the growing heterogeneity within teachers' large classes. Eliminating tracking will only create more difficulties unless class size is also reduced.

After reviewing Smith and Glass' meta-analysis of 59 studies on class size, Cacha concluded that smaller classes are more effective at the primary level, for basic skill instruction, and with low-ability, low-income, or minority students. Reductions in class size make the most difference when the size of the group is 20 or less and when smaller classes are accompanied by changes in methodology. Smaller classes enable teachers to better provide child-centered education. They can promote equal access to knowledge, higher frequencies of engaged learning, and closer monitoring of children's performance.

Evidence suggests that traditional program organization strategies with their emphasis on age and ability-based groupings are ill-suited to helping children attain the intellectual, academic, personal, and social goals of the early learning years. Large class sizes make it difficult for teachers to provide education that is developmentally and individually appropriate. The graded structure of schooling is unresponsive to wide, but natural, performance differences among children of the same age. Ability groups impede, rather than promote, success for all children. All three strategies can result in the mislabeling and premature labeling of children and tracking along racial, gender, and/or economically identifiable lines.

In *A Place Called School,* (1984) John Goodlad recommended that the educational continuum be redesigned so that schooling could accommodate children at their various stages of development. The first phase of schooling, the primary phase, would include children ages four through seven. The second phase, the elementary period, would enroll children ages eight through eleven. Within each phase or "bloc" children would be organized in vertical, multigrade units, rather than in horizontal, single grade classes. Each unit, consisting of approximately 75 to 150 students, would have its own staff that would work in a collegial manner to plan and implement a continuous progress program for each child based on his or her development and individual characteristics.

Vertically organized units encompassing more than one grade, and in which school staff share responsibility for the same group of students for a number of years, have several advantages over organizational schemes that focus on grade level units. They support young learners' need for consistency of adult interactions over time. They give unit staff a longer time frame for observing and assessing children's develop-

ment and school progress. They provide a longer time period for ameliorating learning problems associated with developmental lags. According to Goodlad, the present grade-focused organization of schools is incompatible with the pattern and pace of human development and is definitely not conducive to identifying and correcting developmental irregularities.

Grade-by-age organizational schemes follow a factory model of outcomes in which students of the same age are taught the same things in order to attain the same outcomes at the same point in time. In contrast, many vertically organized units use nongraded or ungraded approaches; they operate on the assumption that developmental, cultural, experiential, and ability differences among children of the same age are to be expected. In this way, they enable each child to be placed at a level commensurate with his or her performance, move at his or her own pace, and to progress to the next unit or level when (s)he has demonstrated mastery of specified unit competencies. Children who learn more quickly are not held back by artificially imposed grade level ceilings. Children who learn more slowly are given the time they need to master knowledge and skills at their own rate. All children have a number of years to work toward the attainment of competencies defined for the unit as a whole. Children who do not attain them spend more time in the unit, but are moved to the next level as soon as their performance in a particular content area meets expectations. For many children this may be less than ten months. Some children may move on in one subject area, but stay in their current unit for instruction in another.

Nongraded, vertically organized primary units are intended to promote continuous progress by creating instructional groups that are homogeneous in terms of performance level. They require the use of a standardized curriculum that spans a number of grades. All children work their way through the curriculum which consists of a series of essential learning objectives and/or benchmark competencies. For example, in both the Montessori program and the Individually Guided Education Program developed by the Wisconsin Research and Development Center for Cognitive Learning, knowledge and skills are sequenced across a three-year time frame.

J.L. Tewksbury identified three ways to implement a nongraded unit. Children may receive multilevel instruction in self-contained, heterogeneous classrooms. They may be assigned to self-contained classes according to performance levels, not age. Finally, children from several heterogeneous classes may be grouped homogeneously by performance level to receive instruction in various subjects from different teachers. Regardless of the strategy by which homogeneity in performance is attained, all groups are flexible in terms of membership and homogeneous for skill instruction in language arts and mathematics only. Children are in heterogeneous groups most of the day.

Comparative studies of nongraded primary units have shown positive results. Bowman, Brody, Gumpper, Ward, Wilt, Chalfant, and Killough all found that students in nongraded programs do as well or better than their peers in graded programs. In all cases where students were matched for IQ, the nongraded achievement scores were significantly higher. In a review of the findings from 37 studies reported between 1968 and 1976, Barbara Pavan, Professor of Educational Administration at Temple University, found that all but two favored a nongraded approach. On standardized measures of achievement and mental health, students in ungraded programs scored significantly higher. In addition, they had better school attendance and held more positive attitudes toward school. Nongraded primary units were particularly advantageous for African-American children, boys, underachievers, and children from lower socioeconomic backgrounds.

Nongraded approaches invariably result in multi-age groupings. However, the rationale for the use of multi-age groupings is different from that for a nongraded approach. According to Katz, Evangelou, and Hartman, authors of *The Case for Mixed-Age Grouping in Early Education,* multi-age groupings are intended to optimize what children can learn when they have the opportunity to interact with children of different, as well as the same, ages and abilities. Similar to family settings, multi-age groupings provide younger children opportunities to observe, emulate, and initiate a wide range of competencies in all developmental domains. They give older children opportunities to offer leadership and share responsibility for helping less mature, less knowledgeable children.

Current concepts of cognitive development favor multi-age groupings. Such concepts suggest that children with similar, but not identical, knowledge and abilities stimulate each other's thinking and intellectual growth. Current concepts of student learning also support heterogeneous age groups. After analyzing the findings of 122 studies on the comparative effects of cooperative learning, including peer tutoring, Johnson determined that both were highly effective techniques for students of different ages. Ellis, Rogoff, and Cromer observed that mixed-age groupings are more like "real life." In the world outside of school, children spontaneously choose mixed-age situations over same-age ones.

Research on multi-age grouping supports its viability as an organizational scheme in the early learning years. Study results reveal a pattern of improved language skills among mixed-age students; in other academic areas, tests either favor mixed-age groups or show no difference in performance between students in multi-age and same age groupings. After reviewing 27 studies conducted between 1974 and 1981, Pratt concluded that multi-age groups are superior to same-age groupings in terms of both academic achievement and social development outcomes. Students on developmental and academic extremes such as boys, slow learners, the gifted, and children with low self-esteem, benefit the most. Katz, Evangelou, and Hartman believe that mixed-age groupings may be most advantageous for four- through six-year-olds who demonstrate the widest range of developmental differences.

There is little empirical evidence demonstrating an optimal age range for multi-age groupings or the most appropriate proportion of younger to older children. Child development theory and craft knowledge suggest that a two to three year age range is most effective. In schools using multi-age groupings (Montessori programs excepted), combinations which have all worked well include 4-5 year olds, 5-6 year olds, 6-7 year olds, 7-8 year olds, 8-9 year olds, and 7-9 year olds. As a rule of thumb, the age range should not be so wide that the models of behavior and competence exhibited by older children are too advanced for the younger children to emulate. The proportion of older to younger children should not be so uneven that the needs and behavior of one age group overshadow those of the other(s).

Where multi-age groups are used, the teacher must actively encourage cooperation and constructive interaction between groups. Although there is not yet evidence to indicate the proportion of time that children should spend in cross-age groups, the Canadian Department of Education and professional organizations in the United States recommend mixed ages for instruction, reinforcement, and enrichment; group projects; problem-solving activities; interest-based experiences; and tutoring. This may include all or only parts of each day, depending on the children's needs, capabilities, and maturation levels.

Research, together with child and cognitive development theories and practitioner knowledge, show that non-graded approaches and multi-age and other forms of heterogeneous groupings can eliminate the

negative effects that may result from grade-by-age and ability-based organizational schemes. However, as H.J. Wilt pointed out in his dissertation on elementary school organization, no single strategy will solve all the needs of learners in a mass, heterogeneous society. In schools where ungraded, mixed-age, and co-operative learning strategies are effective, substantial modifications take place in other areas that influence the effectiveness of the teaching-learning process, for example, methods and assessment practices.

Volume I of the *Plowden Report* from England states that education in the early learning years should harmonize with the nature and needs of young children. Young learners want and need to succeed in school, but in order to do so their schools must be organized in ways that are sensitive and responsive to their developmental and individual characteristics. In 1988, the National Association of State Boards of Education called for the establishment of early childhood units for children aged preschool through grade three. Such units, within an early learning bloc, would reflect proven principles of development and learning in the early years. Kentucky is the first state to establish such blocs in its agenda for restructuring schools statewide. Maryland will be the second.

b. <u>Recommendations</u>

1. Local school systems should organize education for four through nine-year olds as an early learning bloc. Each bloc should have its own mission, philosophy, and set of goals based on the developmental characteristics and needs of young learners, and should comprehend the differences between educational programming for younger and older students. At the same time, the program of the early learning bloc should link to the mission, philosophy, and goals for schooling at subsequent grade levels.

2. Each early learning bloc should operate on the principle of continuous progress. Children should be allowed to learn at a rate commensurate with their ability, interest, and success in learning whether that rate is faster or slower than the norm or above or below grade level expectations.

3. Within the early learning bloc, children should be organized in family units that encompassing more than one age or grade and reflecting consideration of the principles of nongradedness and multi-age groupings.

4. Each *unit's* educational policies and practices should be compatible with the developmental characteristics and needs of 4-6 year olds and 7-9 year olds. Organizational structures that include 8-9 year olds should facilitate their transition to middle school.

5. Within early learning bloc units and classrooms, children may be homogeneously grouped by performance level for portions of the day, but should be organized into groups that are culturally diverse and heterogeneous in terms of age, gender, and ability at least half of each day. The early learning bloc should refrain from using any form of inflexible or exclusive groupings that can result in tracking.

6. Teachers should provide daily opportunities for children to learn in groups of varying composition formed for varied purposes, such as to pursue common interests, promote cooperative learning, address common skill needs, and provide for peer tutoring. Four through six year olds should spend the greater portion of their day in small group and individual activities.

7. The staffing pattern in the early learning bloc should be based on the ages and needs of children, but should not exceed the following:

Age of Children	Group Size	Adult/ Child Ratio
Four years old	20	1:10*
Five years old	24	1:12*
Six years old	26	1:13*
Seven to eight years old	22	1:22
Nine years old	25	1:25

**Adult/child ratio includes the teacher and an assistant. When mixed-age classes are formed, group size and adult-child ratios should not exceed the oldest age classification. However, when four to six year olds and/or at-risk children are placed in multi-age classes, to the extent possible, the size of the group and adult-child ratio should be based on the youngest age classification.*

8. Staff in each unit should plan and implement the program using a collegial approach.

9. Transitional programs should not be used as an organizational strategy in the early learning years.

10. In accordance with the concept of continuous progress, the kindergarten through fourth grade part of the early learning bloc should be a 4, 5, or 6 year program depending upon each child's progress and performance. Children who do not progress, even with documented support, should be given additional time at the end of second or fourth grades.

c. To Read More About Program Organization Refer to the Following Sources

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2. CURRICULUM

Content area curricula should be structured as continuums that span the early learning bloc, and specify performance outcomes at critical junctures along the way. Curriculum content should promote all aspects of development and familiarize children with the entire range of disciplines. Within content area domains, curricula should interweave knowledge, skills, and processes, balancing their acquisition and thoughtful application. Without compromising the intellectual integrity of each discipline, the curriculum should integrate content areas or suggest ways teachers can help children see relationships between them.

a. Perspective

A curriculum is an organizational framework that specifies what children are to learn and in what order. On the surface it seems like an objective syllabus that guides instructional planning. Close examination, however, reveals that curriculum, like program organization, is laden with values and defines opportunities. Its structure can affect the rate at which children are allowed to learn as well as the labels that are assigned to them as learners. Curriculum content influences which aspects of children's development are promoted, what children can come to know and do, and what they can do with what they know. At any given period in history, the values of the educational and sociopolitical communities are reflected in its curriculum.

By taking into consideration the goals of an early learning program, curriculum should help to realize the program's mission. The mission of Maryland's early learning program is to foster children's emerging competency in all developmental and content area domains. Early learning program curriculum, therefore, should address a spectrum of domains in order to promote children's social, emotional, physical, and intellectual growth. During the early childhood years, curriculum content should expose 4-6 year olds to a wide range of symbol systems, including language and literacy, music and movement, number, science, and social science. During middle childhood, it should focus on 7-9 year-olds' command of basic literacies (reading, writing, language usage, science, social studies, mathematics, and technology) while enabling them to begin to master an area in the fine arts and physical domain that complements their individual aptitudes.

Curriculum content in the early learning years has long been a problematic issue. Until the last decade, the syllabus for 4-5 year olds often exemplified what Eisner & Vallance have called the "process fallacy." In this view, how children learn takes precedence over what they learn; activities are often ends in themselves with little regard for content. In contrast, the course of study for 6-9 year olds has tended to reflect the "content fallacy." This fallacy emphasizes the acquisition of skills in a sequential, decontextualized manner. It has affected every content area from reading to physical education. Since skill acquisition becomes the priority, children fail to learn process. As a result, they may learn to decode words, but never learn how to read for meaning; learn how to write grammatically correct sentences; but never learn to write in order to communicate ideas; and learn to classify, categorize and sequence ideas, but never learn how to solve. Moreover, while they are being skilled and drilled, many children lose interest in learning altogether.

Content in early learning programs should balance and integrate all the various curricular elements, recognizing that each is an integral part of learning:

> ***Knowledge*** expands children's vistas and provides a meaningful context for acquiring and applying skills and processes. Content, or subject matter, is essential for children to learn since it provides the substance for their reading, writing, thinking, or drawing.
>
> ***Processes*** provide children with the means to practice their emerging skills. As their familiarity with processes grows, children may put them to work to constructing, modifying and using knowledge on their own. Because reading, writing, computing, converging, thinking creatively, and problem solving are the basis of effective real world functioning, it is essential for children to achieve mastery of these processes.
>
> ***Skills*** are essential to using a process with ease and virtuosity. In school, children have the opportunity to practice their skills of reading, writing, thinking, and problem solving to the point where they become second nature.
>
> ***Dispositions*** such as initiative, resourcefulness, curiosity, cooperation, and persistence facilitate learning. In order to learn to read, write, make decisions, or play the piano, the child must first possess the inclination and habits of mind that enable him or her to do so.
>
> ***Attitudes*** such as self-confidence, competence, and belonging are positive influences on children's performance and achievement. Children with negative attitudes toward themselves, others, or learning have greater difficulty succeeding in school.

Curriculum should be interdisciplinary, providing children both discipline-based and discipline-integrated experiences. Since learning for 4-6 year olds is not divided into distinct content areas, their program of studies should be integrated by using themes or topics as conceptual organizers. Seven through nine year olds are developmentally ready and eager to master knowledge, skills, and processes specific to particular disciplines. Accordingly, their program of studies should be discipline-based, with some social studies and science units presented in the form of interdisciplinary projects. Discipline-based curricula should use a "common-sense" approach to the content area domains. For example, logically connected areas, such as reading and writing, writing and speaking, and social studies and the fine arts, should be routinely connected.

The British Columbia Ministry of Education maintains that thematic or interdisciplinary units can help children make connections between what they learn at home, in school, and in the real world, as well as between content area domains. The problem is that many units frequently offer a potpourri of interesting activities whose educational relevance, interrelatedness, or connections to the real world are unclear. To avoid this problem, thematic units must reflect three essential design features: a scope and sequence of child-relevant concepts drawn from a broad range of content areas; and both teacher-guided and independent learning center activities or projects which foster children's attainment of pre-determined curriculum outcomes.

Curriculum content should have intellectual integrity. According to the British thinker Hirst, each content area domain is a form of knowledge with distinct concepts, principles, rules, methods, skills, processes, and ways of thinking. Curriculum should respect the knowledge structure of each discipline, regardless of the age of the children for whom it is intended. Science activities, for example, should facilitate prediction and the compilation of evidence, not magical thinking. Similarly, literature should present high quality selections to children, and music activities should meet the field's recognized standards.

Curriculum content should be worth knowing in terms of both the disciplines themselves and children's developmental levels. Content area concepts, knowledge, skills, and processes that are presented to children should not merely relate to the content area, but be *integral* to understanding it. The content that is included in the curriculum for children at different levels in the early learning bloc should be included because it is important for them to know to function capably in their present world. As the National Association for the Education of Young Children points out, children and teachers should not have to waste time trying to address content that is developmentally irrelevant or incompatible with children's developmental capabilities.

In each content area, the curriculum should be structured as a continuum of increasingly complex knowledge, skills, and processes. The continuum should span the early learning bloc, reflect children's increasing knowledge, skills, and developmental maturity over time, and lead to the attainment of program goals. Each curricular continuum should have a corresponding set of outcomes and performance-based indicators that can be used to assess children's progress at critical points in the early learning bloc. The outcomes, which remain the same at each point, should identify what children should know, be able to do, or how they should act based on their educational experiences to date. The performance indicators should specify what student performances will determine that the outcomes have been met. In contrast to outcomes, performance indicators should change at each point in the continuum, expecting students to perform at increasingly complex levels as they progress through school.

CRITICAL POINTS IN ASSESSING 4-9 YEAR OLDS' SCHOOL PERFORMANCE

Grade	*PreK*	*K*	*Gr. 1*	*Gr. 2*	*Gr. 3*	*Gr. 4*	*Gr. 5*
Assessment Point			♦♦		♦♦		♦♦
			EARLY LEARNING YEARS				MIDDLE LEARNING YEARS

Insofar as young children develop at varied rates and come from different backgrounds of experiences, there is no body of knowledge, skills, or processes that all children of the same age can possess at the same points in time, particularly when the time between points is of short duration. Curricula defined year by year often place children who are performing above or below grade level expectations at a disadvantage. On one hand, they may impose a ceiling on faster learners' progress. On the other hand, they may prematurely label or track "slower" learners.

Outcome-based, continuous progress curriculum models, by eliminating the artificial boundaries that grade level curricula impose on learning, remove pressure from teachers to push children beyond their develop-

mental and experiential capabilities. They enable each child to work at his or her performance level and progress at his or her own rate, regardless of age or grade. They provide a wider time frame for children to attain curricular outcomes before being formally judged. In Maryland, for example, the educational program for 4-6 year olds should help them work toward the attainment of content area outcomes recently developed by the Maryland State Department of Education, with support from local school system teachers, for the end of grade one (Appendix B). Seven and eight year olds should work toward attainment of the Maryland School Performance Program's (MSPP) grade three outcomes. In preparation for their exit from the early learning bloc, and to promote their transition to the middle learning years, nine-year olds should begin to work toward the attainment of MSPP's fifth grade outcomes.

Over the last three years, no fewer than ten major reports calling for sweeping curricular changes were issued by national organizations representing the disciplines, school administrators, and early childhood field. The reports reflected widespread consensus that the traditional, skills-based curriculum does not reflect how children learn, nor does it impart the knowledge children will need to function effectively in the 21st century. Without radical curriculum reform schools will continue to produce future generations who lack knowledge of the natural, physical, and social sciences and who have difficulty solving life's problems through critical and creative thinking.

Experts in the disciplines and in early education recommend four sweeping changes in early learning curricula. First, curricular emphasis should shift from a focus on the three "Rs" to a broader emphasis on all disciplines and developmental areas. Second, the focus within each content area should shift from an emphasis on skills to an interweaving of skills with knowledge, processes, attitudes, and dispositions. Third, curriculum content should balance the acquisition of knowledge, skills, and processes with opportunities to thoughtfully apply them to real-world, real-life problems. Finally, curriculum should be transformed from rigid, predetermined, grade-specific syllabi to continuums that span the early learning bloc as a whole and specify performance outcomes at critical junctures along the way.

Patricia A. Graham, Dean of Harvard's Graduate School of Education, once wrote that the curriculum should be filled with ideas and ways of knowing that excite and enlighten the child. Children everywhere share a common future of possibility and promise. Schools, therefore, must guarantee them all an education comprised of worthwhile knowledge, important skills, and sound ideals and values. This goal is consistent with one of the three basic principles underlying the Maryland School Performance Program: that all children shall have the opportunity to learn equally rigorous content.

b. Recommendations

1. Each local school system should review and revise its prekindergarten through fourth grade curriculum to ensure that it

   - reflects the Maryland State Department of Education's Mission and Philosophy for the Early Learning Years,
   - supports the attainment of the Maryland State Department of Education's first grade outcomes and Maryland School Performance Program's third and fifth grade outcomes,

- supports the attainment of outcomes identified for foreign language, physical education, health, and the fine arts, and
- leads to the attainment of early learning bloc goals.

2. If necessary, each local school system should use the Maryland State Department of Education/Maryland School Performance Program outcomes and Maryland State Department of Education Curriculum Frameworks as guides for restructuring its curricula, as continuums that span the early learning bloc. Content area continuums should be structured so that as children progress through school, the outcomes for learning are standardized, but the performance indicators become increasingly complex, reflecting children's increased knowledge, skills, and developmental maturity.

3. As part of its curricular revisions, each local school system should identify not only the specific knowledge and skills, but also the processes, dispositions, and attitudes children are to acquire.

4. All early learning program teachers should understand the Maryland State Department of Education content area outcomes and use them as benchmarks toward which their students' learning is directed.

5. Local school system curricula for 4-6 year olds should integrate the various content area domains using themes or units as conceptual organizers. At least some social studies or science units for 7-9 year olds should be interdisciplinary in nature or provide for children's participation in interdisciplinary projects.

6. In cooperation with local school systems, the Maryland State Department of Education should identify (or develop), and disseminate examples of integrated curricula appropriate for 4-6 year olds.

Ages of Children	***MSDE Outcomes Towards Which Children Work***
4-6	Grade 1
7-8	Grade 3
9	Grade 5

7. Each local school system should review its curriculum and implementation guidelines with respect to the intellectual integrity of the content, and to ensure that content and implementation policies meet recognized standards for the subject area domains:

COMMUNICATION

- The English language arts curriculum should facilitate an understanding of how oral and written language work and should also help children acquire positive attitudes and self-confidence in using many forms of oral and written language to express and comprehend meaning. The curriculum should focus on the simultaneous acquisition of reading, writing, speaking, and listening strategies, rather than teaching skills in a regimented, sequential fashion. Implementation of the English language arts program should be integrated to promote reading, writing, and speaking abilities in all content

area domains so that children learn these processes by using them in functional, meaningful ways.

- A list of recommended readings in children's literature should accompany the curriculum in each content area domain. Selections on the list should meet acceptable standards of quality, including the criteria of accuracy if the selections are non-fiction. The list should be periodically updated and be available in classrooms and each school's media center.

CITIZENSHIP AND CULTURE

- The social studies curriculum should provide in-depth learning of concepts in history, geography, political science, sociology, economics, and anthropology. It should enable children to acquire the knowledge, skills, and values needed to begin to make rational and humane decisions, to solve social problems effectively, and to predict the long range consequences of social actions. In implementing the curriculum, the classroom and school should serve as a living laboratory in which socially-active children learn and use a variety of communication, research, thinking, and interpersonal skills to complete projects related to past, present, and future events in the real world.

- The fine arts curriculum should provide a weekly balance of experiences in music, dance, theater/drama, and the visual arts. In addition to creativity and self-expression, the curriculum should enable children to examine cultures and civilizations; to communicate in artistic language using words, sounds, images, and movement; and to think critically by developing standards for judging artistic works based on subjective and objective criteria. Implementation of the fine arts curriculum should provide children opportunities to visit museums, galleries, theaters, and concert halls in order to experience the arts firsthand.

MATHEMATICS, SCIENCE, AND TECHNOLOGY

- The mathematics curriculum should promote children's skills, understanding, and awareness of relationships in the areas of number sense, numeration, computation, estimation, geometry, spatial sense, measurement, patterns, probability, and statistics. The mathematics program should provide daily hands-on opportunities for children to use calculators, computers, and/or other concrete materials to communicate mathematically, develop thinking and reasoning abilities, and solve everyday problems in real-world contexts.

- The science curriculum should deepen children's knowledge of concepts basic to the life, physical, and earth/space sciences, of ecology and technology. It should broaden their procedural skills in using the inquiry approach to investigate the world, solve problems, and make decisions. A variety of hands-on projects, placed in a context which children may personally understand, should sustain children's curiosity, develop their ability to ask questions, encourage them to propose explanations

and find solutions, and help them utilize scientific and technological knowledge in their lives.

- As children progress through the early learning bloc, computer keyboarding skills, word processing, and simple programming should be added to their program of studies in communication and mathematics, science, and technology.

PERSONAL GROWTH

- The physical education curriculum should contribute to children's health, safety, psychological well-being and physical fitness. By fostering their spirit of cooperation and interest in physical activity, it can help them acquire a variety of movement, agility, coordination, and sports and dance-related skills. Implementation of the curriculum should be based on planned experiences, scheduled to take place at least twice weekly, that provide children opportunities to use apparatus and equipment; to observe, model, and demonstrate motor, coordination, agility, and fitness skills; or use skills in combination in games and sports, or creative rhythms, and dance.

- All curricular areas should include affective objectives intended to help children acquire or sustain traits of mind and character that facilitate the development of initiative, self-esteem, self-discipline, independent thinking, achievement motivation, and a sense of responsibility toward others.

- All content area domains should incorporate multicultural concepts intended to help children develop an appreciation of, respect for, and pride in their own and others' heritages and the contribution people of varied cultures and races have made to society. Multicultural activities, going beyond the celebration of holidays and traditions, should involve children in examining their attitudes, stereotypes, and prejudices, and help them understand that while they are unique in themselves, they share many similar needs, feelings, and concerns with children from diverse backgrounds.

- In all content area domains, historical and current events should be presented factually and from multiple cultural and racial perspectives.

- All content area domains should incorporate equity concepts intended to promote children's understanding of their unlimited choices and possibilities and to discourage the development of biases, stereotypes, and age-, gender-, race-, or disability-related achievement deficiencies. Curricular content should be used as a vehicle for developing children's knowledge about the contributions differently abled individuals of both sexes and all races and ages have made and can make to the sciences, arts, and humanities.

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3. METHODOLOGY

Education for young learners should be entirely different from education for older students because young learners are entirely different from and learn differently than older students. Methodology should focus on the process of learning, rather than on teaching, enabling children to acquire knowledge and skills by using them to attain greater goals. Learning should take place in a social setting that encourages cooperative work and play. The methods that are used should immerse children in active, interesting, and hands-on experiences that have relevance outside of school. Finally, they should parallel learning in the real world by being holistic and integrated, and by fostering children's joy, sense of wonder, and delight.

a. Perspective

Methodology refers to the means that are used to promote children's attainment of curricular outcomes and program goals. It includes the time allocations, strategies, materials, routines, climate, environment, and interactions through which intentional learning is brought about and from which a wide spectrum of incidental learning emerges. In the early years, methodology poses special challenges because it must attend to the intellectual and affective dimensions of development, both of which influence children's learning. The methods that are used must help children acquire the knowledge, skills, and processes they need to function capably at their current level of development and, also, need later on in order to continue learning. At the same time, program practices must enhance children's self-esteem and disposition to learn. The means that are used to promote children's intellectual/academic development do not necessarily foster, and may actually be counterproductive to, their socioemotional growth. In planning program implementation, therefore, teachers must give consideration to the fundamental ways in which four through nine year olds should learn.

Harvard clinical psychologist Robert White first employed the term "competence motivation" to refer to the innate tendency of humans to strive to master their environment. Before entering school, children have an inherent need to understand their world which drives them toward physical, intellectual, personal, and interpersonal achievement. During this time, their attention span, interest, level, and sense of mastery rarely present a problem. Children learn in their own ways and by their own means, acquiring a broad range of knowledge and skills. The problems begin when they enter school. In a place specially designed to nourish minds and promote the inclination to learn, children often become disaffected, which diminishes their quest for achievement.

As it is currently practiced, school is often a poor facilitator of children's learning. While early learning program methodology should be informed by children's developmental characteristics, methodology at all levels of schooling tends to treat learners as if they were developmentally the same. In the past two decades research has demonstrated the critical need to match program practices to children's ages and stages of development. If children are to be as successful learning in school as they are prior to it, then early learning program methodologies must become sensitive to their developmental characteristics.

A young child's mind is not an empty vessel into which knowledge can be poured. Nor is it like that of ten-year-old children who can form abstract ideas in their heads. Young children construct knowledge through

active manipulation of the environment. Four through six-year-olds need concrete experiences to develop concepts about the physical and social worlds. Seven through nine-year-olds, although more capable of logical thinking, still need concrete referents to develop understanding.

Direct experience provides opportunities for children to notice, and then explore, experiment with, and use objects and materials in the environment, from which they draw mental schemes of the physical world. Repeated firsthand experiences enable them to expand or correct their mental representations. When objects and events contradict the cognitive constructs children have formed about them, children resolve the discrepancy through assimilation or accommodation. This dynamic, on-going process of creating new mental structures for objects and events that do not fit existing ones, and modifying existing structures so they conform to external reality, constitutes early learning. Children cannot fully comprehend what they do not experience. They must have concrete objects to act on and interact with in order for their intellectual growth to be stimulated.

Today's young learners live in an age in which VCRs, CDs, TVs, and computers are a routine part of life. Technology found in the world-at-large, when brought into the classroom, can enhance teaching and expand the range of learning. If used appropriately and with appropriate software, computers, in particular, can foster the development of intrinsic motivation, facilitate critical and creative thinking, increase children's emergent literacy, and help them acquire a strategic attitude.

Computers, like all learning tools, must be used in developmentally appropriate ways. Research suggests that the best use of computers with 4-6 year olds is as a learning center activity. Computer software should be appealing and interesting, engaging young learners in divergent thinking, not practicing isolated skills. Prior to using computers independently, children should be introduced to them through concrete experiences.

Older learners, those in the 7-9 year old age range, may be involved in computer-assisted instruction (CAI). With appropriate software, computers can serve as patient teachers by pacing the introduction of material and providing encouragement, reinforcement, and correction. Tutorials, simulation, and educational games are other forms of CAI that can provide instruction at students' own paces. Teachers must remember, however, that computers do not teach; they should never replace direct experience as the primary mode of learning.

The human brain has developed so that it functions more effectively through social interaction than solitary activity. Piaget defines social interaction as the interchange of ideas between people. According to Vygotsky, the development of higher order mental functions, such as concept formation and problem solving, is initiated through social interaction, and then internalized psychologically. When children discuss their ideas with others, their own understanding is clarified. When they share their thinking with others, the accuracy of their mental schemes is tested against reality.

Children develop two types of mental schemes: those that have sensorially-available physical referents, and those that are socially defined. Children can develop an accurate concept of objects in the physical environment on their own. However, they are dependent upon interaction with others for the construction and validation of social concepts. Through interaction, including conversation, with adults and peers, children learn how to accommodate their wants, wishes, and intents to those of others. In the process, they

acquire tolerance, a sense of reciprocity, and a cooperative spirit--all conventions that are fundamental to successful human relationships.

As a form of social interaction in which children work together to reach a mutual goal, the benefits of cooperative learning are well-documented. Research suggests that children's attitudes toward school and peers are more positive, and that their self-esteem and achievement increases when cooperative learning strategies are used. They develop a higher level of social and prosocial skills, such as communicative competence, conflict management, sharing, empathy, and altruism.

In spite of the evidence, many early learning programs still rely on competitive methodologies that isolate children from one another. For 4-6 year olds, social interaction and cooperative learning are best promoted through the use of learning centers, but very few first-grade teachers use them. For 7-9 year olds, group projects and peer tutoring promote learning through social interaction, but the project approach is not common in second through fourth grade classrooms.

Young children cannot remain still or listen to teacher talk for sustained periods of time. Dr. Martha Denckla, Professor of Neurology and Pediatrics, and Dr. Patricia Fosarelli, Pediatrician from Johns Hopkins Medical School, have both pointed out that passivity is a time-consuming behavior that children have to make a conscious effort to learn. The frontal lobe, the part of the brain that applies the brakes to children's natural energy, is still immature. What Dr. Denckla describes as "boredom tolerance" does not emerge until around ten years of age. Children, like all individuals, have a limited supply of energy. Learning to sit still and listen detracts from learning in other areas. To acquire more important knowledge, skills, and processes, children need to be actively engaged. Their developmental limitations require them to learn by doing.

Research findings indicate that the brain best comprehends facts and skills when they are embedded in contexts to which the individual can relate. For children to learn by doing, their experiences must be meaningful in terms of their world and interests, useful to them from their own perspective, and related to something with which they are already familiar. Four through nine-year-olds, in particular, who are whole-to-part learners, do not learn knowledge and skills in order to do something. Rather, they acquire knowledge and skills as a consequence of doing something meaningful.

The implications for methodology are clear. In helping children learn facts and skills teachers should place greater reliance on real-life activities. Skill instruction for 4-6 year olds should be provided on a "need to know" basis, with needs being identified as children engage in real-world activities. For 7-9 year olds, skill instruction may precede practical experience, but should lead to skill application via projects, productions, and performances. Throughout the early learning years, learning skills and using skills in relevant contexts should be tightly coupled.

In 1986, the Committee for Economic Development and Carnegie Forum on Education called for education that produces self-directed, goal-oriented adults. Child-initiated activity is the precursor of adult self-direction. Pelligrini, Garvey, Bruner, and Piaget have all discussed how child-initiated activity, in the form of learning centers and projects, encourages risk-taking, persistence, problem solving, and collaboration, and leads to widening levels of competence. Their beliefs are confirmed by the results of a 1987 Oxford study that supported the value of child-initiated activity, or structured play, over free play. According to study re-

searchers, structured play, when based on planning, carrying through, and reviewing one's accomplishments, promotes concentration, a sense of time and time management, imagination, and flexibility.

Learning centers and projects employ practices that are compatible with 4-9 year olds' developmental characteristics. They enable children to acquire knowledge and skills through meaningful, contextually-based activities. They provide a sensible context for social interaction, facilitating conversation, collaboration, and cooperation. Taking the form of hands-on experiences, they sustain children's curiosity and disposition to learn. By allowing children to take control of what they learn and assume responsibility for its outcomes, learning centers and projects engage children in learning that is developmentally appropriate and has a positive long-term impact.

In *Mind in Society: The Development of Psychological Processes,* Vygotsky distinguished between spontaneous and school-learned concepts. Children discover spontaneous concepts on their own through their own immediate experiences. School-learned concepts, which represent a culture's accumulated knowledge, must be conveyed socially, and are often transmitted in school through direct instruction.

Direct instruction has recently come under attack by the early learning community for four reasons. To begin, because it is teacher centered, it is the teacher rather than the children who is immersed in the learning event. Second, direct instruction is often the sole method used in many primary grade classrooms. Third, it places limits on what children learn and provides a limited view of what learning is about. Lastly, its focus on attaining academic skills neglects a more broadly defined competence in cognitive, communicative, and social skills.

Children can learn through direct instruction, and insofar as it enables them to acquire the knowledge and wisdom of past generations, it should be used. However, direct instruction should never be the only, or primary, mode of learning. The younger the children, the less reliance that should be placed on teacher-directed learning.

According to developmental psychologist Constance Kamii, young learners, like all human beings, construct knowledge and learn by one level after another of being wrong. Learning is a complex, dynamic process of engaging in trial and error, chaotic discoveries, and "messy" thinking. It is generative and open-ended in the sense that it invents possibilities, alternatives, and multiple solutions. Learning, according to Kamii, is a mind-expanding phenomenon.

One of the biggest criticisms of primary programs is that they try to reduce learning to a neat, systematic, and orderly process. Valuing conventional over creative thinking, and rewarding conforming over independent behavior, education in the early years extracts risk-taking and mistake-making from the learning process. In the long run, children's learning is diminished and, as reported by the National Assessment of Educational Progress, they fail to acquire the coping and problem solving skills so important to real-world success.

Developing children's abilities as convergent and divergent thinkers is a major goal of early learning programs. Children think convergently when they provide the only right answer to a question or problem. Their responses give the teacher information about what they know. In contrast, children think divergently when they generate multiple answers or solutions. Their divergent thinking enables the teacher to gain insight

into what they understand about what they know; it gives children practice in thinking critically and creatively.

Both forms of thinking are important but, of the two, the ability to engage in divergent thinking has greater real-world transfer, since real-life problems and challenges rarely have a single, right solution. Teachers' reliance on promoting convergent thinking in their students has two additional shortcomings. Questions that only have one answer and/or only require a one-word response do not make cognitive demands on children and thus limit their opportunities to engage in higher order thinking. Repeated experiences deriving the single right answer may lead children to develop erroneous views of what answers and learning are about. They may inaccurately conclude that solving problems in not an internal process requiring reflective thought but, rather, a search for solutions that are external to themselves.

Traditional educational practice presumes that learning is hierarchical and thus requires the systematic introduction of skills delivered in a lock-step method through carefully sequenced lessons. Particularly in regard to the language arts, the presumption is that children's learning proceeds from part to whole: from first learning reading and writing conventions and then using reading and writing for a wide variety of purposes. To the contrary, children learn by extracting meaning from experience. They therefore need to begin with meaningful experiences. In prekindergarten, kindergarten, and first grade the focus of language arts should first be on learning about the functions of oral and written language and then using oral and written language for those purposes. At all levels, reading and writing skills and conventions should be introduced as children's need for them arises.

Through observation, children learn not only how to perform particular tasks, but, also, what aspects of themselves and their experiences are appreciated and respected. Classrooms which immerse children in displays of their own work at different stages of completion, different levels of accomplishment, and across various content areas, send the message that effort, persistence, interest, and multiple forms of intelligence are recognized and valued. Visual environments that reflect the cultures and experiences of the children immersed in them, send positive messages to children about their worth and dignity. When the environment only reflects white mainstream culture, children may infer that only white mainstream culture is valued. Similarly, when children are bombarded with commercially produced displays, they may come to believe that products and perfection are the only recognized standards of performance.

Recent insights into how young children learn are so compelling that the early learning community universally supports them. A wide range of professional groups, including the National Association of Elementary School Principals, National Association for the Education of Young Children, Council for Basic Education, and Carnegie Foundation for the Advancement of Teaching, have unilaterally called for changes in early learning program methodology. Within Maryland, one of the principles underlying the Maryland School Performance Program is that all children should have the right to attend schools in which they can learn and progress. Many early learning programs have a long way to go before their practices enable children to learn in developmentally appropriate ways, thus guaranteeing their success.

b. Recommendations

1. Local school systems and/or schools should develop and implement a daily schedule for 4-6 year olds that provides for curricular balance through content area integration. The daily schedule for 7-9 year olds should reflect a balance of experiences in communication, mathematics, science, citizenship and culture, the fine arts, and physical exercise.

2. Administrators should support teachers in ensuring that recess, preferably out-of-doors, is an integral part of each child's day. In addition, all children should participate, on a regular basis, in a structured program of physical education provided by a certificated physical education teacher.

3. All 7-9 year olds should participate, on a regular basis, in a structured fine arts program provided by certificated teachers. Music and art teachers should collaborate with teachers of 4-6 year olds, helping them integrate age appropriate fine arts experiences into the daily program.

4. Local schools and/or school systems should develop and implement a schedule that provides for a daily balance of teacher-initiated experiences and child-initiated activities in which the teacher may serve as a facilitator. Child-initiated activities should take the form of:

Age of Children	*Primary Methods*
4-6	Small group projects (teacher-facilitated) Learning centers Peer tutoring
7-9	Independent projects (individual or group) Cooperative learning Peer tutoring

5. At all levels in the early learning bloc, teachers should use a multisensory approach to direct instruction and children's independent practice. During direct instruction and independent practice alike, children's understanding should be enhanced through their use of a wide variety of concrete and print materials.

6. In planning and implementing independent work, child-initiated activities, and direct instruction, teachers should provide for meaningful interaction and conversation among children. The teacher and other adults in the classroom should facilitate discussions among children by asking open-ended questions and soliciting their ideas, points of view, and opinions.

7. Teachers in the early learning bloc should refrain from using a lock-step approach to reading instruction that relies solely on a basal program. Local school systems should help schools find and use supplements to the basal reading program that promote communicative competence through trade books, functional print materials, and a variety of writing experiences.

8. A variety of technology, not limited to computers, should support learning in both regular and special education classrooms. Technological materials should be appropriate to the age and level of the users and promote higher order thinking. Prior to third grade, computers may reinforce, but should not replace, learning through direct experience. At third grade and beyond, computers may be used in conjunction with direct instruction.

9. Teachers should embed learning in contexts that are interesting and relevant to children. Learning for 4-6 year olds should be promoted through the use of *whole to part* methods that begin and end with direct experience. For 7-9 year olds, skill acquisition should be embedded in a context of real-world experiences.

10. Children's acquisition of knowledge, skills, and processes should always be linked to activities that enable them to make thoughtful applications and use creative, critical, and divergent thinking.

11. Teachers at all levels in the early learning bloc should use an open-ended approach to children's learning. Children should be encouraged and/or allowed to experiment, take risks, make constructive errors, and offer non-conventional responses. Teachers' questions should be phrased so that there is more than one "right answer". They should expect, and provide time for, children to explain the thinking behind their verbal or behavioral responses.

12. The environment should be print and picture rich and reflect that reading, writing, speaking, and thinking are incorporated into all aspects of the curriculum and used for a variety of purposes.

13. The environment should reflect the current curricular emphases and that the interests, efforts, individuality, and diversity of the children in the classroom are valued.

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4. DIFFERENTIATED PROGRAMMING

Early learning programs should provide children equitable opportunities to succeed by accommodating to differences in their capabilities, background of experiences, and familial and cultural backgrounds. Program accommodations should meet two criteria. To the extent possible, they should be provided in the regular classroom setting and delivered in a timely manner, when and for as long as needed, but no longer. The purpose for differentiating the methods by which children learn and the level of support they receive, should always be the same: to enable all children to attain first, third, and fifth grade outcomes and early learning program goals.

a. Perspective

Differentiated programming is the deliberate and systematic process of modifying the way education is delivered. It ensures that an early learning program is appropriate in terms of children's individual characteristics and promotes all children's attainment of program outcomes and goals. Program modifications are based on an assessment of the strengths and needs of a particular child or group of children who share common background characteristics, and may consist of variations in organizational strategies or methodology and/or the provision of supplementary resources and services. They are intended to provide equitable opportunities for children to learn the competencies specified in the early learning program curriculum. The curriculum, itself, lies outside the domain of variables that may be changed.

Early learning programs have always aimed for achieving heterogeneity in the classroom. This is a practical necessity since children always differ along developmental, familial, and economic continuums ranging from disabled to gifted, stable to disruptive, and poor to rich. American children, also, reflect the world's racial and cultural diversity. African-American, native American, Anglo-Saxon, Asian, or Hispanic, children are all enrolled in early learning programs.

Demographic statistics suggest that as schools move toward the year 2000, levels of heterogeneity and diversity will increase. According to Ernest Boyer, one-third of the children in elementary schools will be African-American or Hispanic. According to data provided in the *American School Board Journal,* May, 1990, the children of immigrants may comprise 20 percent of elementary schools' student population. Added to this will be the heterogeneity caused by economic forces, the changing composition of American families, and the changing characteristics of newborns. The number of children living in poverty will grow. The number of children who start off in life being intellectually, psychologically, or physically impaired will expand. In the not-too-distant future, significantly more children who are culturally diverse, emotionally vulnerable, developmentally delayed, limited in language proficiency, in poor health, hungry, and/or homeless will characterize early learning program populations. The imperative for early learning programs to differentiate their delivery systems to meet the diverse needs of these children will be greater than ever before.

The problem is not that children are and will continue to be different, but that early learning programs have often been ineffective in addressing those differences in ways that promote children's success. Organizational practices and program methodologies have traditionally been unresponsive to cultural differences in learning. Supplementary and categorical programs have segregated low achievers and children with exceptionalities from the educational mainstream, rather than promoting their participation in it. Early learning programs, in collaboration with public and private agencies in the community, have failed to pro-

vide, to the extent needed, support services that address the familial, health, and psychological variables that contribute to low achievement.

Early learning programs in Maryland are obligated to help all children fulfill their developmental capabilities, realize their individual potential, and attain the performance outcomes specified by the Maryland School Performance Program and by the Department in the areas of foreign language, physical education, health, and the fine arts. Research that has been conducted over the last twenty years on cultural differences in learning and on the effectiveness of categorical programs such as Chapter I, special education, gifted and talented, and preschool, provides a great deal of insight into differentiated programming practices that work. Beyond the provision of social, health, and psychological services, which are much needed, research supports methodological variations for children from African-American and Hispanic backgrounds, methodological variations in the regular classroom program for most children with exceptionalities, a greater focus on process and dispositional learning, and the provision of extended day, extended year programs for low-achievers.

Shade has suggested that African-American and Hispanic children, in contrast to their Anglo-American counterparts, demonstrate a field-dependent preference. They tend to view things in their entirety, to be person-oriented, and non-competitive. Akbar has described African-American children's cognitive style as being relational. They attend to multiple stimuli simultaneously, focusing on that which is novel or distinct; tend to prefer non-verbal and oral over written forms of communication; and concentrate on concepts and experiences that have personal relevance.

African-American and Hispanic children do not flourish in competitive, analytical learning environments in which knowledge is presented in isolated content areas according to rigid time allocations. Learning through monotonous drill and practice, or by sitting for long periods of time working alone on impersonal tasks is incompatible with their relational cognitive style. African-American and Hispanic children benefit from a holistic and interdisciplinary approach to education. They need a broad variety of multisensory, multimedia activities that engage their hearts as well as minds. They learn best when they are able to converse and cooperate with others on tasks that are personally relevant. Interestingly, these are the same methods that promote maximum learning for all young children.

Few studies have been conducted on the efficacy of special education and talented and gifted programs at the elementary level, and those that have been conducted have often had inadequate methodologies. However, their findings suggest that for moderately handicapped and gifted children, categorical programs may be no more effective than regular education in ameliorating learning difficulties or promoting intellectual strengths. In addition, each categorical program has its own set of inherent weaknesses that can place children at risk in terms of their psychological well-being.

Oakes, Slavin, and Brookover have referred to special education as a dead-end tracking system in which poor and minority children, who may perform adequately in home and community, are inappropriately labeled and numerically overrepresented. By separating children from the stimulation offered in heterogeneous settings and placing them in a less demanding program, special education may magnify children's deficiencies and perpetuate their classification as handicapped. Since the program does not require exit criteria, children may remain in it indefinitely. In 1988, concern about these shortcomings led the Council for Exceptional Children, together with the National Education Association and American Association of School

Administrators, to call for collaboration between special and regular education, and the mainstreaming of exceptional children into regular education classrooms.

Categorical programs for gifted children have two major weaknesses. First, they are provided on an intermittent basis, overlooking the fact that gifted children are gifted all day long. Classroom teachers may not individually address gifted children's talents, relying on program to do so instead. Secondly, the programs that are provided often assume that all children are similarly gifted in the nature and intensity of their talent, or they may only provide enrichment to children who are academically talented. As a result, young learners who demonstrate exceptional ability in leadership, the arts, and/or physical development are rarely matched to programs that promote those unique capabilities. Gifted children need the support of specialized resources, but their exceptionalities have a greater chance of being promoted when regular and special area teachers plan and provide individualized experiences in which their talents are enhanced in the classroom.

Within the last five years, the focus on low-achieving students has shifted significantly from teachers' behavior to the psychology and behavior of the learners themselves. A plethora of research now indicates that children who perform poorly in school have poor cognitive ability, deficiencies in the area of task performance, and self-defeating attitudes. While they may draw disproportionately from poor and minority backgrounds, their learning problems stem from procedural and dispositional deficits rather than from socioeconomic status or cultural characteristics.

Sternberg defines intelligence as the ability to learn from context and to solve problems that are of consequence in particular settings or contexts. According to Costa, Presseisen, and Brown, Campione and Day, many low-achievers do not know how to learn. They lack skill in thinking through problems, selecting appropriate strategies that will lead to a solution, monitoring their own performance, and reflecting on what was done. Their lack of an active approach to problem solving effects their performance in school-related tasks. Chance, Whimbey, and Alleman-Brooks, Anderson, and Duffy have shown that many low achievers do not understand the content-related purpose of a task or how to break it down into simple, manageable steps. Their lack of concern for accuracy and failure to approach tasks systematically lead to inadequate or incompleted work. Successive failures ultimately result in the self-attribution of "learned helplessness"--the belief that no amount of persistence will bring about learning success.

In order to promote success for children who are falling behind, early learning programs should place greater emphasis on helping them learn how to learn and understand the relationship between effort and accomplishment. Low-achievers need support in talking through the steps they will use to pursue a learning task beforehand, and guidance in evaluating the efficacy of the process afterwards. In order to foster their intrinsic motivation to learn, low-achievers should be assigned work that is personally meaningful or interesting, and appropriately challenging. Overly difficult work produces confusion and discouragement; effortless work lowers self-confidence and denies low-achievers the opportunity to overcome their fear of failure.

What low-achievers need to succeed and what they get are often two different things. Supplementary programs, such as Chapter I, may be delivered in ways that compound their problems. By focusing on children's deficits, supplementary programs provide a low level of skill instruction, forgetting that low-achievers also have inquiring minds and seek intellectual stimulation and challenge. Such programs place children in

long term ability groups that tend to become permanent tracks. This tendency may be inadvertently promoted by school policy. Since schools are only provided with extra resources based on documented need, Chapter I encourages the tracking of low-achieving students. Another detriment to these students is that because supplementary services are provided during the regular program day and school year, children have to miss something in the regular program in order to receive supplementary support. They thus end up having inequitable opportunities to learn the core curriculum.

Barbara Heyns tracked 3,000 school children for a period of two school years and intervening summers. She estimated that 80 percent of the performance differences between advantaged and disadvantaged children could be attributed to what happened (or didn't happen) in the summer months. During July and August home influences reassert themselves: disadvantaged children fall further behind; advantaged children gain. These findings, particularly when considered in light of the weaknesses of school year programs, suggest that extended year programs may be more appropriate and effective in helping children who are behind in school.

Differentiated programming addresses the issue of educational equity. Like the Maryland School Performance Program, it is based on the premise that all young children can learn. Yet, it also recognizes that because children are different, the methods by which they learn, and the levels of support they will need in order to learn, will vary. Equal opportunity does not mean educating all children as if they were the same. It does mean guaranteeing all children the opportunity to be part of the educational mainstream and to acquire the competencies specified in the school system's curriculum. In the past, early learning program outcomes varied drastically based on differences in race, culture, language, gender, and/or economic background. Differentiated programming strategies address those inequities by finding ways to ensure that all young learners succeed.

b. Recommendations

1. Within units and classes in the early learning bloc, Chapter I, special education, and regular classroom teachers should use a collegial approach to provide a single, coordinated learning program for each child. No child's day should be divided among the classroom teacher and resource teachers.

2. Each school should implement an Adopt-A-Student Program to support children who need someone to take a personal interest in them. One or two children should be assigned to a school staff member, such as an administrator, teacher, assistant, or the custodian, who should then serve as their advocate. The assignment of mentors should be limited to school personnel only.

Education for Children Who Are Behind: Chapter I

3. Local school systems should work with the Maryland State Department of Education and federal government in developing flexible models for providing Chapter I resources to any child in need. Rather than labeling particular children, however, any child in the early learning bloc whose performance indicates need should be able to receive support when, and for as long as needed, but not any longer. The goal of Chapter I support should always be effective intervention.

4. Local school and/or school systems should provide extended time projects, such as after-school, weekend tutorial, and summer school programs. The projects should broaden students' horizons based on their interests and needs and use methods other than remedial drill and practice. A larger portion of Chapter 1 and state compensatory education monies should be allocated to extended time projects.

Education for Exceptional Children

5. To the extent possible, handicapped and gifted children should be educated in regular classrooms and provided resource assistance to address their disabilities and/or talents. Handicapped children who are placed in self-contained classrooms full time should have daily opportunities to interact with their non-handicapped peers.

6. In developing a special education child's individualized education plan, the Admission, Review, and Dismissal committee should identify performance-based exit criteria.

7. In order to promote the talents of children who exhibit exceptional ability in the fine arts, physical education, interpersonal domains, and academic areas, music, art, physical education, and other resource teachers should collaborate with classroom teachers in planning and providing programs specifically geared to promote their strengths.

Education for Children From Diverse Backgrounds

8. Teachers should be aware of the parenting practices, norms, and values of the cultures represented in their classrooms, and take them into consideration when planning learning activities and judging children's performance.

9. In early learning program classrooms, the visual environment should reflect and the materials should be representative of the many cultures in society, but avoid stereotypes and overgeneralizations.

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5. ASSESSMENT

a. Perspective

Assessment of children's development and learning should be comprehensive, longitudinal, and descriptive. It should primarily consist of systematic observation and performance-based activities that provide children with multiple opportunities to demonstrate their attainments or strengths in all content areas and developmental domains. Standardized tests should not be used prior to grade 2, and used thereafter only if they are criterion- and curriculum-referenced. All assessments should yield new information that increases staff's knowledge and understanding of each child, enabling them to make appropriate program decisions.

Student assessment is the multi-faceted and on-going process of gathering and interpreting information about children. The process has four parts, all of which are necessary if assessment is to benefit educational programming. Student assessment consists of identifying the way and level at which children perform varied tasks in varying contexts; considering the meaning of those performances in terms of children's total functioning as individuals; suggesting likely causes of any problems; and using the information to make decisions about individual children or the early learning program, in general.

During the early years, maturation interacts with children's environments, influencing their development. In turn, development affects how and what children learn. In order to adequately identify and understand children's developmental strengths and needs and plan an appropriate learning program for them, information should be gathered about them that is comprehensive in scope, longitudinal, and descriptive. It should include data about their social milieus, such as family and culture, and developmental characteristics, such as social competence, motor skills, and learning style. Rather than label or categorize children, assessment data should profile the level and range of knowledge, skills, attitudes, and dispositions they do and do not display over time.

In contrast to assessment, testing is narrower in scope and usefulness. Along with observation and interview, it is a means for obtaining information about children. Standardized tests are evaluation instruments whose content, administration, and scoring are fixed. Teacher-made tests are locally developed evaluations usually intended to measure children's attainment of curriculum-related objectives. Tests that meet recognized psychometric standards and are appropriately administered can provide vital objective information that would be unavailable otherwise.

Standardized, norm-referenced tests interpret a child's performance in terms of the average performance of a reference group. They provide quantitative data about a child's relative performance across multiple domains of development and achievement. Insofar as the scores they yield are general or global, they are best used to assess children's abilities upon entering school or their overall progress in school. They are also useful for evaluating program effectiveness. Criterion-referenced tests can be standardized or teacher-made. They interpret a child's performance in relation to a predetermined standard and provide qualitative data about a child's progress in achieving competencies viewed as critical to development, or to the mastery of particular content area domains. Insofar as criterion-referenced test results yield information about specific competencies children have or have not acquired, they are best used as the basis for planning in-

struction. Since norm- and criterion-referenced tests are designed for different purposes, they should not be used interchangeably.

Whatever the method used to evaluate children, it should meet established standards of acceptability. The American Educational Research Association, American Psychological Association, National Council on Measurement in Education, and experts in the field of early childhood education such as Kamii, Meisels, Bredekamp, and Nurss, have identified six criteria that all forms of early learning assessments should meet. Three focus on the technical characteristics of the assessment methods or instrument themselves. These are validity, reliability, and cultural sensitivity. The remaining three focus on the effects of assessment. They are practicality, curriculum alignment, and responsible usage.

Validity is the degree to which an assessment instrument or method measures what it claims. It is the most important of the six evaluation criteria. In order to be valid, the content, format, and response mode of a particular method or instrument used to assess a particular area must be representative of that area. In addition, there must be evidence that the assessment results are in line with children's classroom performance on similar tasks. Reliability is an indicator of a measure's dependability. Reliable assessments, if administered on different days or by a different person, will yield about the same results. Reliability, is particularly important when observation is the basis for evaluation. There must be evidence that different observers who conduct independent recordings of the same event or behaviors will agree in their assessment of children. Assessment methods and instruments whose reliability and validity are not documented are untrustworthy, and should not be used to make decisions about individual children or the program.

The way standardized achievement tests, such as the Comprehensive Test of Basic Skills (CTBS), are administered and scored may make their results invalid and unreliable for determining children's eligibility for resources such as Chapter I. Standardized achievement tests require children to sit still, remain quiet, work alone, use a pencil, and correctly mark a piece of paper for long periods of time. Such test-taking skills often exceed their developmental capabilities. Children's difficulties are magnified when tests are administered in large groups with minimal opportunities for individual assistance. In addition, standardized, norm-referenced tests compare children to each other as if development was universally the same. They are constructed so that only half the children who take them do well. Fifty percent of all children are thus guaranteed to fall below the "norm", even though from a developmental perspective their capabilities may be within the range of what is considered normal.

Student assessment methods should be sensitive to age, developmental, gender, language, cultural, racial, and socioeconomic differences among children. Assessment methods, such as pencil and paper tests, that are appropriate for older children are inappropriate for younger students. Assessment methods that best enable European-American children to demonstrate what they know may be biased against Orientals, Native Americans, African-Americans or Hispanics. The content of assessments may also discriminate against children on the basis of their socioeconomic status, race, creed, or color. After all, what young children know and understand is largely dependent upon the social and familial milieus in which they have been raised.

The fact that standardized achievement tests are culturally biased has been well-documented by Tyler and White, Ryan, Samuda, and Weckstein, among others. Most such tests rely on a standard form of English that is less familiar to children from other cultural groups than it is to European-Americans. Few tests pro-

vide any evidence that they have been evaluated by linguists. For minority children, the test is first and foremost a language test, regardless of its intent. In addition, anthropologists have shown that children learn to see and manipulate their environment in ways that are appropriate, but culturally unique. Achievement tests mirror European-American culture. Minority children may respond to items on them in ways that are "right" in terms of their own culture, but "wrong" when measured by European-American culture.

As an evaluation criteria, practicality addresses issues of time and usefulness. In general, student assessment can only be justified to the extent that it yields new information in a timely manner; if it changes the course of educational events when necessary; and if it promotes rather than detracts from learning. Many standardized tests do not provide new information because of the gap between when they are taken and when the results are available . By the time teachers receive spring test results, they already know their students' strengths and weaknesses. In addition, summer experiences have a powerful effect on children's September school performance. Tests administered in the spring may not accurately reflect children's abilities when school starts in the fall.

The total amount of time allocated to assessing students per program year is also a practicality issue. Assessment should be a natural and ongoing part of learning, rather than an event which interrupts it. Standardized tests can disrupt learning, which may stop for several weeks while teachers prepare children for the test and then administer it. Both the National Association for the Education of Young Children and the National Center for Fair and Open Testing question whether most standardized tests are worth the time allocated to them in the early grades. The days devoted to practicing for and taking the test consume valuable instructional time that could be better spent in meaningful, hands-on learning.

Early learning assessment practices should involve the same theoretical orientation as the curriculum and methodology. There should be logical links between what the program intends to do, how the program is organized and implemented, and how children's attainments are determined. On the subject of methodology in evaluation, Scriven identifies the need to simultaneously match assessment and program goals, program goals and instruction, and instruction and assessment. According to the Maryland School Performance Plan, National Association of Elementary School Principals, and National Assessment of Educational Progress, the essential objectives in all content area domains should include both low-level learning, such as acquiring basic knowledge skills, processes, and dispositions, and higher-order competencies, such as problem solving and using knowledge and skills in practical contexts. Since the methods that measure children's acquisition of basic skills are ill-suited for evaluating their ability to make thoughtful applications, multiple assessment formats are needed.

Maryland's Mission and Philosophy for the Early Learning Years acknowledges that young children are active, concrete learners who show great variation in development and performance at different times and in different situations. They learn best through "real-life" tasks embedded in "real-life" contexts. The Mission further states that two major goals of the early learning program are to build children's self-esteem and to extend their emerging knowledge and skills in all developmental areas. Early learning programs should promote these goals by using assessment methods that are age and individually appropriate.

The Mission and Philosophy for the Early Learning Years has four implications for assessment. First, assessment content should evaluate all aspects of children's development. Second, assessment methods should primarily consist of performance-based evaluations that occur as a natural part of children's learn-

ing experiences. Third, children should have multiple opportunities to demonstrate what they know and can do. Finally, assessment should support learning and development, avoid labeling children, and never threaten their self-esteem or sense of adequacy.

At all levels in the early learning continuum, assessment should focus on describing children's strengths, deficits, and needs across all areas of development and content area domains. This should be done by integrating observation, interview, and performance-based data. Performance-based data, such as dated work samples, audiotapes, and the results of practical tests, which require children to complete hands-on activities in order to demonstrate their ability to apply knowledge and use processes, can be compiled into portfolios. Information acquired through observation, interview, and performance-based evaluations can be summarized on teacher-or school system-developed curriculum-referenced checklists, inventories, or rating scales.

Experience-based assessment methods provide direct evidence of children's developmental and academic attainments over time. In comparison to pencil and paper tests, they are more likely to be valid since they are developmentally appropriate and their format and response mode can be consistent with the area being assessed. Children's writing, for example, can be assessed by means of studying their written compositions. Similarly, children's reading ability can be evaluated by listening to them read or by talking with them about books they have read. Performance-based assessments are also more useful for diagnosis and instructional planning. They not only indicate what level of knowledge and skills children have attained but, also, provide insight into children's reasoning processes and the thinking behind their errors.

Insofar as young learners are concrete thinkers and only beginning to refine their fine motor skills, pencil and paper tests are inappropriate in prekindergarten, kindergarten, and the early part of first grade. Thereafter, if they are not used exclusively, such tests are adequate for determining how much knowledge and which skills children have mastered. Their usefulness increases if children are also required to explain how they arrived at an answer or why they responded as they did. To provide valid assessments of the instructional program, pencil and paper tests should be curriculum-referenced.

The final criteria that early learning assessments should meet is responsible usage. Student assessments are used responsibly when: decisions with far-reaching consequences are not based on a single test score or performance rating; the results of evaluation procedures and instruments are directed toward their intended purposes; evaluation outcomes benefit rather than harm children; parents are involved in the process; and evaluation findings are translated into effective action. Assessment outcomes must be used to promote or correct the particular combination of capabilities and deficits that make up the uniqueness of each child, or the process is unjustified.

Assessment is primarily the responsibility of teachers who are in the best position to use the findings and to plan developmentally appropriate programs. As part of their responsibility, teachers should seek assessment information from parents and share evaluation data with them. Parents should receive prior notice about any screening, readiness, or achievement test that is administered and be apprised of the results. The early learning staff should use non-technical language to explain what the scores mean and do not mean and the outcomes to which they may lead.

In order to plan an effective and appropriate learning program for each child, teachers need a broad context in which to frame the child's development and performance. Parents can provide that context by offering social and biographical information about children's experiences and behavior outside of school. Teachers should take such data into consideration when planning instruction and evaluating children's learning.

Teachers should share information about children's development and performance with parents through written reports and through conferences scheduled at times convenient to all parents, but particularly those who are working. The information that is disseminated should be descriptive rather than judgmental and individualized rather than comparative. It should help parents understand and appreciate their children's growth and attainments. It should discourage them from categorizing or labeling their children or punishing them for their weaknesses.

At all levels in the early learning continuum, the data provided on report cards should give parents insight into their child's capabilities, deficits, and needs across all curriculum areas. Prior to second grade, when development is uneven and idiosyncratic, narrative reports organized by curricular domains or program goal areas are more appropriate than numerical or letter grades. The latter do not provide sufficient information to enable parents to promote learning at home. Beyond first grade, criterion-referenced rating scales, such as those used with performance inventories, are more appropriate than letter and number grades. During parent-teacher conferences, the data in children's portfolios should validate the ratings and other information provided on the report card.

The early learning community has expressed serious concerns about the extent to which pencil and paper tests, particularly standardized tests, have invaded the primary grades and are routinely administered en masse. It has also been critical of the extent to which tests are commonly misused. When standardized achievement tests are used for accountability purposes, they often drive curriculum and methodology. This leads to a narrowing of the curriculum into score-producing, low-level basic skill areas and neglects critical and creative thinking, physical and social development, and the fine arts. It perpetuates the use of inappropriate methods in which teachers rely on direct instruction, drill and practice, pencil and paper tasks, and rote memorization to promote children's mastery of discrete, isolated testable skills. Test scores are often used as the basis for allocating Chapter I and other supplementary resources; ironically, they may reward low achievement since the continuation of services is tied to demonstrated need. At the same time, the reliance on test scores may also result in the discontinuation of services that contribute to children's higher achievement.

In *The Superintendent's Can Do Guide to School Improvement*, Marcella Dianda, from the Council on Educational Development and Research, maintains that school systems gamble by using standardized tests to measure instructional effects. The tests cannot capture the effects of a school system's curriculum and instructional program. Nor do they provide superintendents' with much information for curriculum and instructional improvement. As an alternative to standardized tests, Dianda recommends broader use of instruction or curriculum-referenced tests.

Responding to the widespread misuse and abuse of standardized achievement tests, many professional organizations and states are taking steps to limit their use prior to second or third grade. The National Association for the Education of Young Children, Association for Supervision and Curriculum Development,

National Association of State Boards of Education, National Association of Elementary School Principals, National Council of Teachers of Mathematics, and International Reading Association have all adopted resolutions or issued statements calling for an end to or sharp restrictions on administering standardized tests *en masse* before third grade. The Mississippi and Georgia State Departments of Education have discontinued standardized testing in kindergarten. Texas and North Carolina have passed legislation that waives requirements for, or outlaws, standardized testing prior to third grade. Wisconsin now has a similar bill under consideration.

The only purpose of assessment is to make appropriate and effective programs and services available to the greatest number of children. A well-thought-out, coordinated assessment system can realize its purpose by reflecting a program's theoretical and philosophical underpinnings and using a multi-source, multi-measure approach. However, any assessment system, no matter how appropriate, must be used with caution and reserve in the early years. As Frank Smith points out in *Insult to Intelligence: the Bureaucratic Invasion of Our Classrooms,* in the process of monitoring children to find out what they can do, educators may never notice whether children show any interest in doing those things on their own. In the long run, regardless of children's performance or achievement levels, they must be nurtured to continue learning, act morally and intelligently, and extend their literacy in self directing and responsible ways.

b. Recommendations

1. Student assessment practices used by local school systems and/or schools should be sensitive to developmental, ethnic, and cultural differences among children. They should enable each child to demonstrate what (s)he knows and can do regardless of his or her language, learning style, disability, or ability.

2. Each local school system or school's assessment program should recognize developmental differences in the range of children in the early learning bloc. The younger the children being assessed, the greater the reliance the program should place on teacher observation, performance-based assessments such as portfolios, audiotapes, interviews, and inventories, and parent input.

3. Pencil and paper tests should not be used to assess classroom performance in prekindergarten and kindergarten.

4. Each local school system should develop and institute a curriculum-referenced assessment program that provides for the systematic collection and recording of *qualitative* as well as quantitative information about children's development and academic attainments over time. The program that is developed should provide teachers with clear guidelines for how to use multiple measures of assessment to describe children's performance and progress.

5. Teachers should use information that is compiled about children's performance, including both their strengths and needs, to determine what they need to learn next. Workbooks and textbooks should not be used to determine the sequence of children's learning.

6. Local school systems should limit the mass standardized testing of children in prekindergarten through first grade. If there is a need to administer a standardized test prior to second grade

- it should be administered individually or in group sizes no larger than three,
- it should be valid and reliable in terms of the background characteristics of the children being tested and the test's intended purposes, and
- children's parents/guardians should be informed in advance and information about the test and test results should be shared with them afterwards. Any interpretation of the test scores should describe, in non-technical language, what the test covered, what the scores do and do not mean, and how the results will be used.

7. Local school systems and/or schools should make placement decisions about children with exceptionalities, i.e. those who are at risk, handicapped, or talented and gifted, using multiple sources of information including that obtained from their parents or guardians. In making such decisions, greater weight should be placed on documented performance than on assessed aptitude or achievement.

8. Each local school system should examine the number, frequency, and purposes of all formal assessments administered to children and reduce them to what is necessary to meet local, state, and federal requirements and ensure children are not overtested.

9. Early learning program teachers should share information about all aspects of children's development and school progress with their parents and guardians on a regular basis through written progress reports *and* conferences. Conferences should be scheduled at mutually convenient times.

10. Local school systems should use performance-based, not skill-based, inventories for written progress reports. Through first grade, report cards should provide descriptive accounts of what children can do and still need to attain relative to the curriculum and early learning program goals. Beyond first grade, descriptive accounts may be used in combination with number or letter grades. Representative samples of children's work over time, as included in their portfolios, should be available and interpreted to parents during parent-teacher conferences.

11. When statewide decisions are made about assessment policies in early learning programs, MSDE early childhood/early learning specialists should participate along with content area and evaluation specialists in all levels of the decision-making process.

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C. IMPROVING EARLY LEARNING PROGRAMS

Each school is responsible for implementing an appropriate and effective early learning program. An appropriate program uses curricula, learning methods, and assessment strategies that are compatible with the developmental and individual characteristics of the children being served. It has low student-teacher ratios, involves families in the educational process, and ensures children continuity of experiences on a daily basis and from one school year to the next. In an effective early learning program, most children attain early learning program goals, Maryland School Performance Program outcomes, and outcomes for the fine arts, physical and health education, and personal growth.

1. PROGRAM ACCOUNTABILITY

a. Perspective

The World Book dictionary defines accountability as the state of being answerable for specified actions, events, and/or outcomes. Reviews of the professional literature indicate that accountability has been a driving force in education since the 1970s and will continue to exert a heavy influence in the 1990s. However, the accountability movement of the 1990s is conceptually different from that of the past. Rather than evolving from legislative mandates for school systems to document compliance with state regulations, today, accountability calls for each school to be answerable for its actions and their effects on children. As recommended by President Bush in a December 1990 speech to representatives of the Jobs for America's Graduates program, accountability "1990s style" has a greater focus on school autonomy and responsibility. Within each school, programs for young learners are expected to be accountable, just like those at subsequent levels of the educational continuum.

Recent reports by the National Governors' Association, National Conference of State Legislators, and the President's Education Summit all call for schools to be held more accountable for helping a higher proportion of students attain higher levels of competency. In Maryland, one of the major goals of *Schools for Success* is improved achievement for more students as determined by their performance on criterion-referenced tests administered in third grade. Early learning programs, therefore, must be held accountable for improving students' performance.

While national and state policymakers are calling for outcome-driven education, professional organizations such as the Council of Chief State School Officers and National Association of State Boards of Education are calling for public schools to be held more accountable for implementing high quality programs. High quality programs make a difference, but have elements and use strategies that are compatible with the characteristics of young learners. Research by Schweinhart and Weikart from the High/Scope Foundation suggests that programs that lack elements of quality and/or use strategies that are inappropriate, may help children attain academic goals, but have negative long-term consequences on their personal and social development. In order to ensure that all aspects of children's development are enhanced, early learning programs must also be held accountable for educating children in developmentally defensible ways.

The outcomes for which early learning programs should be accountable are identified in the Maryland State Department of Education's Mission and Philosophy and in goals for the early learning years. MSDE has identified seven goals for prekindergarten and kindergarten. These are: communication, cognition, curiosity, creativity, self-concept, socialization, and physical development. MSDE's goals for prekindergarten and kindergarten overlap with goals identified by the Early Learning Years Commission for education in prekindergarten through fourth grade, and with goal areas identified by the Governor's Commission on School Performance for all levels of schooling. These are: communication, citizenship and culture; mathematics, science, and technology; and personal growth.

Synthesizing the three sets of goals results in five outcomes for which all early learning programs are accountable. Programs for young learners should help them (1) acquire knowledge, skills, and processes, and learn how to use them to make thoughtful applications in the areas of language arts, mathematics, science, social studies, technology, the fine arts, and health and physical fitness, (2) develop a strong sense of self-worth that includes a sense of personal efficacy, (3) acquire social competence, (4) sustain their curiosity and disposition to learn, and (5) help them use critical and creative thinking to solve problems of personal relevance.

According to Michael Lipsky, political science professor at the University of Wisconsin, educational goals are characterized by multiplicity and ambiguity. State goals for education are broad, and frequently not written in measurable terms. When operationalized at the school system level, they often become long lists of sub-goals delineated by content area. Supplementary programs and resources usually come packaged with their own purposes, too. In the long run, too many nebulously stated goals create a conceptual swamp that confuse, rather than clarify, instructional priorities.

In order for early learning programs to be held accountable for educational outcomes, those outcomes must be precisely specified and what they mean in terms of children's performances should be absolutely clear. To facilitate this, school staff may engage in a goal clarification process. Examples from Oregon, Ontario, and Kentucky suggest that such a process has four steps. First, staff should consider what children need to know and do in the early years to achieve success in the middle learning years. Second, through collaboration with central office staff and using local and state curriculum documents as references, a set of measurable goals should be identified. Third, goals should be prioritized in terms of children's needs and the school system's objectives. Intellectual goals should not be emphasized to the exclusion of other developmental areas. Finally, the list of goals should be disseminated to faculty, staff, and parents and used as the basis for classroom instruction, resources provided to support instruction, and efforts to improve the program. The goals of supplementary and categorical programs should be coordinated with and lead to the attainment of those for the early learning program in general.

Accountability that focuses on program outcomes is based on the assumption that all children can learn, regardless of their background characteristics and/or social circumstances. In a recent survey conducted by the Carnegie Foundation for the Advancement of Teaching, nearly 80 percent of teachers held television, lack of parental support, poor nutrition, and various forms of neglect and abuse responsible for children's school failure. In a 1989 policies and practices survey conducted by the Maryland State Department of Education, kindergarten through third grade teachers ranked low student ability, lack of home support, and student immaturity as the top three reasons for children's lack of school success. While there is

considerable evidence that the characteristics and social milieus of some children may make educating them more difficult, the new accountability movement does not accept such factors as legitimate grounds for failure. Early learning program staff and staff that provide supplementary or categorical services are accountable for promoting all children's mastery of essential curricular objectives and attainment of goals for the early learning bloc and of *Schools for Success*.

The outcomes to which early learning programs lead are meaningless without considering the paths that are taken to attain them. In addition to helping children achieve program goals, the public expects that early schooling will educate children with care; that is, with attention to their developmental and individual characteristics. However, as Glickman points out in "Open Education for the 90's: Between the Pillars", focusing on developmentally appropriate content and methodology can and has resulted in the miseducation of children. Without criteria to serve as guides for determining what is appropriate, teachers may lower their standards, relax their expectations, and implement activities without any reason other than that they are fun. Being accountable for implementing quality programs, means, first and foremost, having appropriately high expectations for all children and using methods that are developmentally challenging to them.

The standards of quality to which prekindergarten, kindergarten, and subsequent early grades should be held accountable are those set forth by the early childhood communities in the nation and State. The National Association for the Education of Young Children, National Association of Elementary School Principals, and Maryland State Department of Education have each identified quality criteria for programs serving young learners. These criteria include:

- a clearly stated philosophy and set of goals
- a curriculum that focuses on all aspects of development
- the use of heterogeneous grouping strategies most of the time
- an interactive hands-on approach to learning that balances teacher-directed activities and child-initiated experiences
- assessment methods that are primarily observational or performance-based
- promoting continuity of learning throughout the early learning bloc
- ensuring children's health and safety each program day
- a low teacher-student ratio
- involving parents/families in the educational process
- collaborating with community agencies to help families access child care and other needed services
- being self-regulating and self-renewing.

As schools are faced with an increasing demand to account for the outcomes of their early learning programs, they will need the capacity to compile, retrieve, and analyze data efficiently. Yet the Governor's Commission on School Performance has pointed out that many schools in Maryland do not have the capability to do so. To ensure that early learning programs are managed for results, schools need a centralized, and preferably computerized, student information system that enables staff to examine the program's short-term curriculum-related effects, long-term goal-referenced impact, and short and long term results by sub-group. To truly evaluate outcomes, early learning staff must discern what proportion of students are succeeding and, also, whether success varies significantly across the student population, by socioeconomic background, age, race, or gender.

The best source of information on student progress is to be found by examining attainment of curriculum benchmarks; that is, competencies that are important building blocks for more complex learning. When supplemented with data obtained from screening and standardized tests, curriculum-referenced data provides a comprehensive picture of each student's absolute and relative performance over time, and yields information that is useful for assessing program outcomes.

A recent study conducted by the Maryland State Department of Education revealed that students make their greatest achievement gains in the early learning years. From fourth to tenth grade, achievement levels out--students who were ahead don't move further ahead, nor do students who are behind catch up. As the public becomes increasingly aware of the importance of the early learning years in determining children's later school performance, early learning programs will be subjected to greater scrutiny. Process evaluations focus staff attention on elements of the program that make a difference in the outcomes to which the program leads. They provide concrete evidence of the extent to which significant variables in the formula for early school success are adequately addressed by the program.

Few systems are currently in place for conducting evaluations of program quality, despite the useful information they yield. In 1986, the Maryland State Department of Education, in collaboration with the National Association for the Education of Young Children, instituted a dual accreditation-validation process. The process primarily focuses on prekindergarten or kindergarten, but includes a component that evaluates continuity of learning across subsequent grades. Self-study and program improvement are at the heart of NAEYC accreditation-MSDE validation. Early learning staff, collaborating with their building administrator and central office personnel, rate their program against two sets of indicators, determine its strengths and weaknesses, and decide what changes need to be made. After implementing the changes, they may choose to have the quality of their program externally validated by independent observers. Although the formal accreditation-validation process ends when a decision has been rendered, NAEYC requires staff to submit annual reports as a part of which they describe their efforts to further strengthen their program.

John Dewey once said that what the best and wisest parent wants for his child, the community must want for all its children. If the educational community takes that precept seriously, then what early learning programs must hold themselves accountable for is clear. Parents want schools that help their children become competent and confident: schools which give children the knowledge, skills, and attitudes they need to face and shape the future. But parents also want schools that educate their children with discretion: schools that take into consideration children's unique needs, nature, and learning style. Early learning programs, therefore, are accountable for being both developmentally appropriate and educationally effective.

b. <u>Recommendations</u>

1. Each local school system, in collaboration with the Maryland State Department of Education, should develop a computerized management information system that profiles each child's attainments in the areas of communication, citizenship, the fine arts, mathematics, science, and physical education from first through fourth grade. Information in the system should primarily consist of curriculum-referenced data, but may also include data obtained from sources such as EIIP screening and standardized tests.

2. Each local school system and school should use data compiled from profiles developed by the Maryland State Department of Education and EIIP data to ascertain the characteristics and needs of its students at the beginning and end of kindergarten and end of first grade. Findings should be used by the local school systems as the basis for allocating human, material, and fiscal resources and by schools in developing their improvement plans.

3. Each local school system should use the data in its management information system to evaluate the impact of Chapter I, special education, prekindergarten, and EIIP interventions on helping children attain early learning program/*Schools for Success* goals.

4. The Early Identification and Intervention Program (EIIP) should be strengthened and incorporated into the Maryland School Performance Assessment Program. In order to use EIIP for accountability purposes, the Maryland State Department of Education should

   - revise Maryland Public School Law Section 7-201 to reflect current thinking as it relates to screening, and limit screening to first time entrants to public schools, kindergarten, and first grade,
   - revise the three questions on the MOSCK and EIIP Recommendation Sheet so both can be used to assess Goal 1 in *Schools for Succcess*, and,
   - report performance of EIIP at-risk identified students on the third and fifth grade criterion referenced tests as part of the "Maryland Report Card".

5. The Maryland State Department of Education should use the recommendations in the Early Learning Commission Report as the basis for developing criteria against which local school systems can judge the quality of their early learning programs. The criteria that are developed should be linked to existing standards for prekindergarten and kindergarten.

c. <u>To Read More About Program Accountability Refer to the Following Sources</u>

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2. PROGRAM IMPROVEMENT

Program improvement is most effective and long-lasting when those who are held accountable for program quality and outcomes also have the authority to determine changes. School-based program improvement should be based on a self-study process in which program and student data and current knowledge in the field are used as guides for decisionmaking. Outside agencies, such as central office personnel and the Maryland State Department of Education, should play a supporting role by offering consulting services and creating conditions favorable to each school system's and school's program improvement goals.

a. Perspective

In *Schools for the 21st Century,* Phillip Schlechty wrote that if information is to affect decisions and outcomes then staff must believe in results, believe results will make a difference, and believe ***they can make a difference in results***. Such a belief structure is the cultural bedrock upon which program improvement is based. It means that the accountability data that is collected must be used to answer questions about the appropriateness and effectiveness of the early learning program. It also means that answers must become an impetus for embarking on a course of change to resolve the discrepancy between what is and what should be.

A number of scholars such as Clune and White, Elmore, Murphy, and Combs, have studied the past four decades of educational reform. They concluded that efforts to change educational practices by state departments of education and local school systems failed to have much impact at the school level. On the other hand, schools that took it upon themselves to change the way they conducted their business made dramatic improvements. The lesson that was learned is that educational change cannot be imposed from the top down or mandated from the outside-in. The school must be the center of change: it is where the educational work force is concentrated; where education takes place; and where the validity of theory and research are tested in a real-life context.

Unless conditions for change exist at the school level, no substantive or long-lasting change will occur. Two prerequisites to school-based change are knowing its purposes and understanding the process by which it will occur. In and of itself, change is not a panacea; nor does it guarantee program improvement. In order to make a difference it must be linked to accountability and improve student outcomes by strengthening the means undertaken to achieve them. Additionally, those involved in the change process must have a common frame of reference for knowing how to proceed. They need "up front" assurance that change, regardless of where it takes place, will be viewed as a slow, arduous, and risky process replete with errors as well as success.

The history of educational change at the school level has been dominated by the application of a Research, Development and Diffusion model (RDD). This rational, linear, scientific model for change is characterized by the identification of a problem and research-based solution, and subsequent plans to implement and evaluate the solution in a real-life context. The fact that many schools have remained impervious to change despite reform efforts suggests that the RDD model does not work in practice.

Four inherent shortcomings of the Research, Development, and Diffusion model make it inadequate for improving schools. First, the model overlooks the fact that new insights and understandings about learning and the educational process, changing student populations, school faculties, and societal expectations, and implementation of change itself, always create the need for further change. Change is not a one-time event; rather, it is an on-going dimension of the educational process. Second, the RDD model of change assumes that if something works in one place, it will work anywhere. It fails to consider the role of context in implementing innovations. It also disregards the important role that human beings play in the process of school improvement. School practitioners, acting from their own points of view, can facilitate or impede educational change. Finally, the RDD model usually proposes one, and only one, solution to each problem. As Sarason pointed out in *Culture of the School and the Problem of Change,* to act with such single-mindedness and certainty in the complex, dynamic arena of education is inherently self-defeating. It is counterproductive to the substantive changes schools want to bring about.

Within the last several years an alternative paradigm for improving schools has begun to be accepted. Referred to as an Organization Development model of change (OD), it involves various constituencies who have a stake in schools in formulating workable solutions to the problems that face them. Fullan, Miles, and Taylor define organization development as a planned, coherent, systematic, and sustained effort to bring about deliberate change through an on-going process of collaborative self-study, self-correction, and context-embedded improvement. Numerous studies have shown that OD models have a greater rate of success in changing schools than RDD models.

The Organization Development model does not stress a particular structure, but offers a general framework that allows for variation by school. Its genesis has three phases. During the initiation phase, school data is used to identify and prioritize problems. Faculty, staff, and other interested parties examine their ideas and concerns relative to the most pressing problem, discuss its causes and possible solutions and establish goals for change. They review the relevant literature, identify obstacles (and determine if they can be overcome), and identify available human and material resources. Then they reach consensus on the nature of the change and develop a plan for its implementation.

The implementation phase involves a process of trial and error so that the change will be accommodated to the school context. Throughout the second phase, the concerned parties meet together, discuss issues and problems relating to implementation, and determine what adaptations are needed. In the long run, implementation becomes a stage of mutual adaptation in which the school and the planned course of change are both modified. During the third stage, called integration, those who were involved in the change reflect upon its value and impact. If deemed successful it becomes "standard operating procedure," provided that the school system and community also support it.

One of the hallmarks of the OD model is the decentralization of authority that it involves. Authority to make decisions and responsibility for their consequences is dispersed primarily among faculty and staff, but also to parents and the school community. Agencies that traditionally had a regulatory and compliance function, such as central offices and the state department of education, collaborate with and support schools in their efforts to be self-improving.

The Organization Development model is predicated upon making shared decisionmaking a cultural norm. It supports administrators, staff, and parents working together as equals to develop solutions to school-

based problems. It gives teachers, parents, and community members a vote, as well as a voice, in the decisions that are made. As Dickson Corbett, Applied Research Co-Director at the Research for Better Schools points out, to involve teachers (or anyone else) in decisionmaking activities without enabling them to influence the decisions that are made is a hollow form of empowerment; it only creates resentment toward activities that were formerly viewed with ambivalence.

School improvement requires visionary leadership. According to C.G. Miskel in "Principals' Perceived Effectiveness, Innovation Effort, and the School Situation", there is abundant evidence demonstrating the strong relationship between the leadership role of the school principal and the behavior of the school as an organization. According to Maryland's kindergarten through third grade teachers, leading change is not yet a role many principals have begun to play.

In order for team-based decisionmaking to lead to school improvement, the principal must first be committed to the idea that the school's greatest resources are its human resources. (S)he must channel the energy, expertise, and experience of staff, parents, and the community into efforts to realize the school's vision of what can and ought to be. Through teaching, respect, and power-sharing, the principal must encourage the school community to think critically about how the school operates and to work together for change.

Change at the school level requires sanction and support from all levels of education. Just like principals, by their managerial styles, can facilitate or thwart the capacity of staff to pursue school improvement, so also can state departments of education and central offices enhance or impede the school's capacity to be self-renewing. Local school systems have the responsibility to establish parameters for local control and decisionmaking. Beyond that, both agencies should form partnerships with schools to promote change through collaboration.

Michael Cohen of the National Governors' Association describes the appropriate role of state departments of education and central office personnel as being that of advisors, consultants, and information brokers. Staff from the two agencies should assist schools in developing and implementing their improvement plans. They should introduce people in schools to useful research and models of program practice. Carrying out this role may require developing and/or piloting appropriate methods and materials; identifying and providing opportunities for school personnel to observe models of excellence; supporting innovation and promising practices through special funds or grants; and sponsoring professional development academies where school teams can work together to increase their knowledge and skills.

Having the will and know-how to improve and the ability to improve are different issues. The very conditions of education make intelligent, sustained school-based change difficult. They need support, stimulation, and interaction in order to perfect their craft, yet they spend the majority of their days isolated from one another. Teachers need discretionary power in order to accommodate the educational program to the individual strengths and needs of their students, yet, they are bound by regulations and policies that make adaptation impossible. Time, flexibility, and knowledge, the three ingredients that pave the way for change, are least likely to be a part of teachers' current professional circumstances, and are unlikely to be dealt with in policy initiatives that make schools the center of change.

Time is a critical factor in the change process. Before any change ever takes place, staff need time to examine school data and their existing beliefs about education, conceptualize and win support for change, and devise a realistic plan. Once the process gets under way, they need time for reflection, discussion, and problem solving. If self-improvement is to be a valued function of schools, then time must be built into, not added on, to staff's normal work schedule. Reports from the Carnegie Foundation, Education Commission of the States, National Governors' Association, and National Commission on Excellence all include recommendations for re-deploying staff to create blocks of time for school improvement on an on-going basis and/or for adding days to the school year to facilitate it.

Accountability for results is a critical component of the change process, but the flip-side is the risk that changes will be judged prematurely. Referring to improvement-related accountability, a 1988 article in the *National Staff Development Journal* pointed out that under the best of circumstances change may take anywhere from three to five years to become institutionalized. Legislators and policymakers, therefore, should avoid a guillotine view of accountability--a view that expects quick fixes, overnight results, and leaves little margin for error. In the interests of substantive improvement, those to whom schools are accountable should give change time and remove the pressures often placed on schools to document immediate results.

Granting flexibility in exchange for accountability is integral to school improvement. Currently, schools are bound by so many rules, regulations, and mandated procedures that efforts to change only end in frustration. The Governor's Commission on School Performance recognized how mandates create barriers when it recommended the elimination of constraining rules and regulations. States that pioneered site-based decisionmaking such as Arkansas, Maine, Massachusetts, North Carolina, Washington, and California, unanimously agree that policies must be developed for waiving regulations on a case-by-case basis. Any effort to promote school-based improvement relies on the establishment of a systemwide procedure to inform schools how they can request waivers, and to identify who can support them in overcoming regulatory barriers to change.

What schools may discover, however, is that tradition, rather than restriction, is the real obstacle to change. According to David, Cohen, Honetschlager, and Traiman in *Results in Education,* the cumulative effects of many years of education by compliance has resulted in a mind set that routinely operates by standardized procedures. As a result, what are perceived as "rules" may simply be the unwillingness of a school official to forego years of unquestioned practice. School buses that will not drop children off at child care facilities, the mass administration of standardized tests, and prekindergarten and kindergarten curricula driven by holidays and the seasons are but a few of the barriers that tradition imposes on early learning programs.

Knowledge is the lifeblood of the school improvement process. It informs staff about the range of possibilities and directions in which change can go. It prevents them from replicating a project on blind faith, without deliberation as to its appropriateness, applicability, and potential effectiveness in their own school context. It empowers staff to be innovative by providing the theoretical underpinnings for creating changes that have a high probability of success. Even though knowledge is critical to making informed, intelligent decisions, as Jon Saphier, President of Research for Better Teaching maintains, it is the most neglected aspect of the school improvement process.

In the process of change, schools need to generate information from within, by their own means, and seek knowledge from without, through assistance from local colleges and universities, central office staff, and state departments of education. The inner process of knowledge production consists of compiling data about the school's needs, vision for change, and current status, and using it to set goals for self-renewal. The outer process of knowledge production consists of obtaining information about what exists, what has worked, or what has been written relative to the goals for self-improvement, and using it to develop an action plan for change. Efforts to be self-renewing are most effective when the two knowledge bases and the people who provide them are brought together to study and solve school problems collaboratively.

Visions of what can be, must be understood and embraced by others in the school system and community-at-large, in order to become shared visions. Many change efforts fail because they lack broad-based support to defend and sustain them. An effective public relations campaign is particularly useful in pressing for change in early learning programs. Many policymakers, legislators, parents, and educators are only beginning to understand why early learning programs cannot be cast in the form of schooling at later learning levels, and public education helps to increase this awareness.

School improvement requires a strong marketing and development focus to gain support from those who will be asked to sustain it with their time, energy, or money. Politicians, policymakers, and taxpayers can be expected to ask four questions on the subject: what the change is and how it will affect them; whether it is feasible; whether it is theoretically sound and justifiable in terms of the purposes of the school; and how the change will be undertaken and when results will be reported. Constituency concerns or criticisms of any of these issues should be taken seriously. In the long run, significant changes in the structure of education and process of schooling will depend on the endorsement of society-at-large.

Over the last four decades, the public has expressed more condemnation than commendation of schools. Despite the criticism, and in the absence of extrinsic rewards, administrators and teachers persist in their efforts to provide the best education to the greatest number of children. Theodore Sizer once wrote that autonomy, money, and recognition are the three elements of culture that signal respect and appreciation. Of the three, recognition does most to lift the spirit, replenish the soul, improve motivation, and renew commitment. As a part of any effort to sustain school-based improvement, local school systems, the Maryland State Department of Education, the media, and the public in general, should show appreciation to schools whose early learning programs meet standards of quality and/or demonstrate outstanding student success.

Change is not one thing, it is many. It is where new ideas, knowledge, and skills confront existing circumstances and transform them into school improvement. It is the rearrangement of traditional roles and responsibilities, the reallocation of increasingly scarce human and material resources, and the re-examination, and ultimate relinquishing, of deep-seated attitudes and values. Change is both exciting and threatening, energizing and exhausting, and frustrating and rewarding. Without it, schools would probably continue to do a pretty good job. But only with it, can they hope to realize the ***full*** potential of the staff and students inside.

b. Recommendations

1. An on-going, planned, and systematic change process, under the leadership of the building administrator, should be pursued by each school within parameters established by the local school system. The process should provide for collaboration among interested faculty, staff, parents, and community members, be based on data compiled at the school level, and focus on improving the appropriateness and/or effectiveness of the early learning program or the outcomes to which it leads.

2. Concentrated blocks of time should be regularly built into faculty and staff's work calendar to facilitate the attainment of each school's improvement goals. The time that is provided should be added onto the work day, week, or year. It should not reduce the time allocated for instruction.

3. The school year for professional staff should be extended, giving them time for program improvement, professional development, and instructional planning.

4. Programs and/or strategies that a school adopts to improve its early learning program should be supported by theory and/or research and have a proven record or high probability of success.

5. The Maryland State Department of Education should provide leadership and financial and technical support to local schools and/or school systems in developing innovative programs or practices in the areas of program implementation, curriculum development, assessment, staff development, parent/community involvement, and interagency networking.

6. The Maryland State Department of Education and local school systems should develop specific agendas for promoting public awareness of the need for, components of, and location of high quality early learning programs.

7. The Maryland State Department of Education and local school systems should recognize schools whose prekindergarten or kindergarten programs meet standards of quality and/or whose early learning programs meet standards of excellence as defined by *Schools for Success*.

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IV. HOME, SCHOOL, AND COMMUNITY REVISITED: BUILDING FAMILY PARTNERSHIPS TO PROMOTE CHILDREN'S SCHOOL SUCCESS

IV. HOME, SCHOOL, AND COMMUNITY REVISITED: BUILDING FAMILY PARTNERSHIPS TO PROMOTE CHILDREN'S SCHOOL SUCCESS

Research findings provide unrefutable evidence that family support for education results in higher student achievement. Consequently, family involvement should be initiated and sustained throughout the early learning years. Epstein's model of parent involvement outlines five components of effective family-school partnerships: parent education, home-to-school/school-to-home communication, parental involvement in the classroom, parental involvement in school or program governance, and parental support in reinforcing children's school learning at home. Of the five components, home support for school learning has the greatest potential for benefitting children since it contributes to their improved performance in school.

A. Perspective

According to Bloom and Coleman, research findings confirming the benefits of parent involvement in children's education first began to appear about 25 years ago. The cause and effect relationship between student achievement and parent participation has consistently been strengthened by subsequent research. Henderson's 1981 annotated bibliography, *The Evidence Grows* cites 35 studies showing the benefits of home-school partnerships, including measurable gains in children's school performance. The 1987 update, *The Evidence Continues to Grow: Parent Involvement Improves Student Achievement* summarizes 18 additional studies with similar findings.

A quarter century of research has resulted in the recognition that parent involvement in children's education is not just important, but critical, to their school success. Consequently, almost every recent educational report recommends home involvement as an integral component of the schooling process. The 1988 policy statement issued by the National Association of State Boards of Education recommended that primary programs establish an environment in which parents are involved as essential partners in the education of their children, and in which they are ensured opportunities and access to volunteer in classrooms, exchange information and ideas with school staff, and participate in program decisionmaking and assessments of the program. Similarly, the Maryland School Performance Program includes parent and community involvement and participation as an essential component of its action plan for promoting children's educational success.

Based on research reports and data compiled by the League of Schools Reaching Out, Davies proposed expanding the concept of parent involvement to include "family", thereby enabling and encouraging all significant others in children's lives to provide support for their education and receive support in learning how. Family involvement in education should be targeted not only to parents who are willing or able to participate but, also, to hard-to-reach and non- or limited-English-speaking parents as well. It should not only focus on parental involvement activities that promote the school's agenda, for example, children's educational success but, also, address familial priorities, for example, effective parenting and childrearing. In *Early Childhood Education: An Individualized Approach to Developmental Instruction,* Lillie maintains that home-

school-community partnerships should have four essential dimensions: providing social and emotional support to parents, exchanging information with them, improving and promoting parent-child interactions, and fostering family involvement in children's education at home and in school.

A wide range of educational research suggests that there are several key family process variables, or ways of behaving, that are clearly linked to children's school success. Children with high achievement scores have parents with high expectations for them, who respond to and interact with them frequently, and who see themselves as teachers of their children. Such parents act as models of learning and achievement and consistently reinforce what children are learning in school.

Family process variables supporting student achievement can be fostered or neglected by the type of homework children receive. In many schools, homework in the early grades consists of parent-child activities or games which parents and children must work on *together*. Many schools give older primary students homework that, when completed, requests parental comment. Both types of homework--parent-child projects and assignments in which parental feedback is solicited--engage family members as active informed participants in reinforcing school learning at home.

Research conducted by Epstein and others indicates that involving families in children's learning at home has the greatest potential for improving their school performance. Schools that help parents understand how to assist their children at home in specific school subjects stand a better chance of improving their students' achievement. This is particularly true for achievement in reading, which numerous studies including those conducted by Chomsky, Durkin, and Dunn have shown begins and continues in the home.

Cummins found that children whose parents read to them at home on a daily basis made greater gains in reading achievement than students working with a reading specialist at school or those who only received regular classroom instruction. While evidence from research provides undisputable proof that families play an important role in laying the foundation for learning to read and supporting children's continued growth as readers, many families lack the ways and means to promote their children's interactions with books. The problem is compounded when public libraries are inaccessible to families and school libraries do not allow children to check out books. Learning to read requires, first and foremost, having access to print materials.

Many families with whom schools interact have different values and come from different cultures than those of the professional staff. When parents are culturally or economically different, or limited in English proficiency, school staff often assume that they cannot or will not contribute to their children's education. To the contrary, research conducted in Maryland, New England, and the Southwest has found that poor and minority parents care deeply about their children's school performance and want to support their education, but often do not know how. Language barriers, historical exclusion, and feelings of insecurity or low self-esteem make them reluctant to initiate contact with the school in order to obtain support.

A number of strategies have been shown to be effective in increasing the involvement of "hard-to-reach" parents; in other words, working parents or parents who, for whatever reasons, remain isolated from the school. Many families feel more comfortable when their contact with the school is mediated by other parents whose circumstances are similar to their own. Some parents feel more at ease when the school uses outreach strategies such as home visitors, family learning centers in store fronts or churches, a welcome wagon concept for new and transfer students and their families, and/or bulletins or newsletters that keep

legal and custodial parents and caretakers informed of what children are learning in school and how they can help at home. Communication with and involvement of limited English-speaking parents is, understandably, promoted when bilingual parents assist them in understanding the school's expectations for their children and ways they can help their children at home.

The parent-to-parent approach, which usually consists of a home visitor program, seems to make a significant difference in fostering involvement among parents who are culturally or economically different than staff in schools. Rich believes the approach has three unique benefits. It is efficient, enabling families to receive help in an expedient manner, but without placing the burden for support solely on schools. Equally important, it builds a sense of friendship and community among families, promoting the view that children's educational success is a shared neighborhood responsibility.

Current statistics show that not only schools but, also, families have inadequately promoted many children's academic and social success. However, an old African saying serves as a reminder that "the whole village educates the child." Since families are anchored in society, the definition of family involvement encompasses the communities of which they are a part. Therefore, the whole community shares the blame when children are inadequately educated.

The potential of parent involvement is enhanced when community agencies, such as after-school care providers, churches, businesses, and the media become involved as partners. In this, the best strategies are relatively easy to deliver. In a structured setting, any member of the community can serve as a tutor or mentor for children. Programs such as Dial-A-Teacher, Homework Hotline, and the Parent Line/ Communicator capitalize on the capabilities of technology to assist parents and children with school-related matters. The Parent Line/Communicator, for example, sponsored by the Institute for Drug and Alcohol Abuse, is a 24 hour-a-day computerized telephone system that gives callers three- to four-minute tape-recorded messages about school policies, parenting skills, educational issues, and home/school cooperation. In operation in the Indianapolis Public Schools for the last three years, the telephone system averages about 2,500 calls a month.

The idea that business and industry share responsibility for the extent to which parents are involved in children's education is only beginning to be acknowledged. Still, employee policies do facilitate or diminish parental participation. Research shows that businesses which allow parents to attend parent-teacher conferences or volunteer in the school on company flex time, establish parent resource libraries at the workplace, or offer parent education seminars at the work-site, contribute to the success of children and, also, to the job satisfaction of their employees.

As the two major forces entrusted with educating and socializing children, parents and teachers should be natural allies. But far too often they find themselves on opposite sides of the fence. Chrispeel found that, in many instances, administrators' and teachers' low expectations for and negative attitudes toward low-income and non- or limited-English speaking families prevented the development of programs that promoted their participation. She maintains that schools have an obligation to support the educational competence of all families by helping them become more involved in and supportive of their children's education. However, just as hard-to-reach parents lack knowledge about and confidence in initiating contact with the school, so also, do many school staffs lack knowledge and skill in initiating and sustaining contact with parents.

According to Mavrogenes, educators need to be better informed about family-school-community partnerships, a subject that receives minimal coverage in pre-service teacher education. In their study, for example, Calvin and Williams found that only 37 percent of teachers reported having even one class period on parent-teacher relations. Calvin and Williams, along with Mavrogenes and Rich, concluded that future teachers need significantly more coursework in the important role that families play as educators of their children.

Getting families involved in reinforcing children's learning at home is frequently viewed as the "meat and potatoes" of family parent participation. An increasingly vocal sector of the parent community, however, is not content to sit home and leave educational decisionmaking to others. Since the late 1800s, parents have formed advocacy groups in an effort to influence school policies and practices. Today, some parents are fighting for a more direct role in school and program governance.

In between the two parent participation extremes of no involvement and heavy influence, early learning program personnel are recognizing that because parents know their children best, have a vested interest in their welfare, and are most affected by school policies and practices, they should be involved in making educational decisions. Nearly every major early childhood organization, including the National Association for the Education of Young Children, National Association of Elementary School Principals, and High/Scope Foundation has identified parental involvement in program development and assessment as a major criterion for judging the quality of an early learning program. Whatever degree such involvement takes, it must focus on the academic mission of the school and the impact of school policies on children's growth and development. As a special report in *Education Week* cautioned, parental involvement in school governance could have disastrous effects if parents become mired in politics and/or fail to represent the views of their surrounding community constituencies.

In its report, *Building Student Success Through Parent/Community Involvement,* the Maryland School Performance Program State Parent/Community Involvement Team wrote that schools no longer have the choice to involve families and the community in the education of children, because family-school-community partnerships are essential to children's development and achievement. Educators, parents, businesses, and other community agencies and members must assume joint responsibility for overcoming the syndrome of low expectations and stunted achievement. They must contribute to the fulfillment of all children's individual potentials and to the realization of all children's educational success.

B. Recommendations

Home-School

1. Each local school should develop specific strategies for involving families in their child's education at home and receiving feedback from them. For 4-6 year olds the strategy should primarily consist of, but not be limited to, informal activity packets that promote parent-child interaction and enable parents to make comments or ask questions. For 7-9 year olds the strategies should take the form of, but not be limited to, homework notebooks, as a part of which daily parental feedback is requested, or monthly fliers that focus on a particular topic. On one side of the flier, parents should be provided tips for providing home support in the identified area; the flip side of the flier should seek parental feedback.

2. Each local school system/school should use some of its Chapter I monies to develop and fund a home visitor program. The purpose of the program should be to improve student achievement by strengthening families' competency in promoting children's learning at home.

3. Each school should recruit bilingual adults from the community to help non- and limited-English-speaking children negotiate their way in regular classrooms. Bilingual adults should also make home visits to help non- and limited-English speaking families acquire information about school expectations, processes, and policies, and how to promote learning at home.

4. Local school staff should initiate and sustain communication with "hard-to-reach" parents by developing networks among parents of children in the same class or family unit.

5. Each local school should add print and non-print parent education materials to its library. The library should be open to children and families before and after school, enabling them to check out children's books and/or materials related to effective parenting and childrearing.

6. Each school should involve families in annual assessments of its early learning program and in the development and implementation of its program improvement plan.

7. Additional funding should be provided for the expansion of special education parent-child centers, enabling them to service all children and their families.

Home, School and Community

8. The Maryland State Department of Education, Division of Library Services, should work with public libraries to institute a plan that enables every child in Maryland to receive a library card when (s)he is registered for school.

9. Each local school system should work with its Chamber of Commerce to work out a plan in which employers provide release time to parents so they can participate in their child's school program.

10. Chambers of Commerce should develop award programs, recognizing businesses that engage in activities promoting the welfare of young children and for their families.

11. The Home-School-Community Council should continue to function as an advocate for children and their families. As part of advocating for school-aged children, the Council should:

    - establish a system for monitoring, and if needed, provide support to children who are absent from school
    - investigate ways to establish a "Homework Hotline" for parents and children
    - identify ways to provide after-school care and full-day summer recreation/education programs
    - recruit personnel from business and industry to help the school improve its educational program and serve as tutors for children, and
    - negotiate with local businesses or group of businesses to adopt a school.

12. As part of their pre-service education, all future teachers should be required to take a course in family-school-community partnerships.

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APPENDIX A

Profile of Fundamental Experiences Needed Through Age Five; Outcomes and Sources of Accountability

PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE FIVE; OUTCOMES, AND SOURCES OF ACCOUNTABILITY

Purposes:

1. To inform parents when their child is still very young about the experiences (s)he will need to enter school prepared to learn.
2. To identify the agencies responsible for helping the family prepare the child for school.

Column I Identifies the fundamental experiences needed in the first sixty months of life to attain developmental outcomes that are prerequisite to school readiness.

Column II Lists the essential indicators for determining whether the experiences were provided.

Column III Identifies the knowledge, attitudes, dispositions, or attributes a child should have when (s)he starts kindergarten, and must have by the time (s)he starts first grade, assuming that the kindergarten and first grade programs in which the child is enrolled are developmentally appropriate.

Column IV Identifies the agents or agencies who are responsible for creating the conditions under which families can provide the experiences. It is based on the premise that preparing children for school is everyone's responsibility.

PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE 5; OUTCOMES AND SOURCES OF ACCOUNTABILITY

I **Experience**	II **Indicators**	III **Outcome: The Child**	IV **In Addition to the Family, Who is Accountable?**
1. Receives on-going health care that includes prevention as well as treatment.	*MOTHER* • Received prenatal care starting in the first trimester of pregnancy. • Refrained from using drugs, alcohol, or tobacco during pregnancy. • Knows and/or learns how to care of his or her child. • If employed, has health benefits that provide comprehensive coverage for child. • Knows how to access and when to use health/medical services, if needed. • Can obtain transportation to and from health and medical services. *CHILD* • Has had all required immunizations. • Periodic health care includes screening, diagnosis, and treatment of problems. • Has received a growth and developmental assessment. • Receives dental check-ups on a regularly scheduled basis and treatment of problems. • Has received vision and hearing screening and treatment of problems. • Receives continuity of medical care when ill.	Is healthy.	Dept. of Health and Mental Hygiene/Local Health Depts. Hospitals and Clinics/Hospital and Clinic Outreach Programs Physicians, Psychologists, and Dentists Employers (Employee Health Benefits) Child Find
2. Lives in a safe, stable environment.	*CHILD* • Has a permanent home. • Home is clean, heated, well-lighted, and free from environmental hazards. • Home is located in a community with minimal crime, violence, and drugs. • Is always under adult supervision. • Typical day consists of familiar routines carried out on a predictable schedule. *FAMILY* • Family members are free from drug/alcohol addiction, mental illness, and unmanageable stress. • Distress and discord are resolved without resorting to violence, abuse, or abandonment. • Family has a support system consisting of friends, relatives, or neighbors.	Is secure, and free from environmental hazards and environmentally-induced stress.	Dept. of Housing and Community Development Dept. of the Environment Fire Depts. Police Depts. Health Depts. (Addiction and Social Work Services) Depts. of Human Resources
3. Has adequate rest, nourishment, and clothing.	*CHILD* • Eats at regular times each day so (s)he is well nourished. • Eats a variety of foods from all food groups. • Gets eight or more hours of sleep a night. • Daily routine includes time for naps or rest. • Clothing is appropriate for the indoor climate and outdoor weather conditions.	Is alert and energetic.	Child Care/Preschool Providers (Federal breakfast and lunch program) Dept. of Health and Mental Hygiene/Local Health Depts. Depts. of Social Services

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PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE 5; OUTCOMES AND SOURCES OF ACCOUNTABILITY

I **Experience**	II **Indicators**	III **Outcome: The Child**	IV **In Addition to the Family, Who Is Accountable?**
4. Receives consistent love, affection, and care from a limited number of responsive adults.	*CHILD* • Has a "permanent" family. • If parent(s) is working, has a single, stable arrangement for care. • Has the opportunity to form a secure attachment to at least one adult who is attuned to him or her and meets his or her physical and emotional needs and need for age-appropriate stimulation on a continuing and dependable basis. *CHILD CARE PROVIDER* • Knows how to provide age-appropriate care. • Family day care home is registered. • Child care facility is licensed and meets quality criteria as determined by the National Association for the Education of Young Children. • Adult-child ratios in family day care homes and facilities are low, enabling the caretaker to be attentive and responsive to child's needs. *PARENT/CARETAKER* • Is warm and affectionate: provides comfort, love, and cuddling. • Is observant and patient: responds appropriately to child's cues and quickly to child's distress. • Is physically and emotionally available: interacts frequently with child on a one-to-one basis.	Trusts adults; has a positive attitude toward adult authority and is amenable to adult guidance and direction.	Dept. of Human Resources Juvenile Services Depts. Dept. of Economic and Employment Development-Day Care Financing Program Maryland State Dept. of Education Office of Children, Youth, and Families Child Advocacy Groups that Receive Public Funds
5. Receives positive verbal and non-verbal information about him or herself, family, and race or culture.	*PARENT/CARETAKER* • Provides frequent opportunities for child to express his or her likes, dislikes, points of view, and feelings and pursue personal preferences and interests. • Responds to child's curiosity about his or her anatomy and physical features with accurate, age-appropriate information. • Refrains from imposing gender stereotypes that limit child's potential and development. • Using words and gestures, expresses pride in child's strengths, capabilities, and accomplishments. • Helps child acquire personal information about self, family, and own culture. • Provides opportunities for child to learn about the values, rituals, standards, and language of mainstream culture. *PARENT(S)* • Is sufficiently in control of own life to accept the child as (s)he is at each stage of development. • Spends time with child. Involves child in enjoyable experiences with family members and in the celebration of family/cultural traditions. *CARETAKER* • Knows child's cultural background and uses such knowledge to plan experiences and when purchasing toys, books, and other materials. • Treats child and his or her family with respect and dignity. Refrains from judging child or providing differential (discriminatory) treatment on the basis of his or her family or cultural background, gender, or physical abilities.	Has a positive self-concept that includes some information about self, family, and culture.	Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers Dept. of Employment and Economic Development Dept. of Human Resources

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PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE 5; OUTCOMES AND SOURCES OF ACCOUNTABILITY

I **Experience**	II **Indicators**	III **Outcome: The Child**	IV **In Addition to the Family, Who Is Accountable?**
6. Has daily opportunities to use large and small muscles.	*ENVIRONMENT* • Includes safe outdoor space where child can run, jump, climb, swing, use balls, and ride wheeled-toys. • Includes a wide variety of age-appropriate toys to touch, manipulate, and explore. *PARENT/CARETAKER* • Ensures that rigorous physical activity, preferably out-of-doors, is part of child's daily routine. • Provides time for child to play with toys that promote his or her fine motor abilities. • Allows and encourages child to test his or her motor, balance, agility, dexterity, and co-ordination skills and offers support as needed.	Has the motor abilities required to accomplish age-appropriate tasks.	Depts. of Planning Depts. of Recreation and Parks Realtors/Developers Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers
7. Has daily opportunities to play with objects, others, and ideas, in order to construct knowledge about the world, use thinking skills, processes, and imagine.	*PARENT/PRIMARY CARETAKER* • Has the means to provide child conrete materials and diverse experiences. • Encourages child's exploration and manipulation of a wide variety of objects. • Provides child with toys, games, and/or household objects for matching, sorting, classifying, comparing, sequencing, and counting, and sometimes assists child in using the materials for those purposes. • Encourages child to engage in dramatic play and provides time, a place, props, and access to other children so (s)he can do so. • Provides child with a wide variety of enjoyable, firsthand experiences that build his or her knowledge in art, music, movement, arithmetic, science, health, safety, and social studies. • Provides opportunities for child to interact with people of different ages. • Talks with child about his or her past and future experiences, encouraging child to recall and describe past events and anticipate and help plan future ones. • Routinely asks "Why?", "What if?", and "How?" questions; provides time for child to respond. • Teaches child how to solve problems. • Encourages child's natural curiosity.	Has formed basic ideas about the physical and social world. Uses such knowledge to solve problems of personal importance.	Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers Museums, Science Centers, Theaters and Other Cultural Arts Groups that Receive Public Funds
8. Is immersed in a language-rich environment in which adult forms of language are heard and modelled and language conventions and usage are acquired through conversation with others, primarily adults.	*CHILD* • Feels (s)he can babble, talk, play with language, sing, and ask all kinds of questions without being quieted or belittled. *PARENT/CARETAKER* • Routinely listens to child, interprets the meaning of his or her utterances, and responds with language accommodated to his or her level of development. • Allows and encourages child talk and experimentation and play with language. • Uses child's firsthand experiences as a context for expanding his or her vocabulary and language usage. • Extends child's vocabulary and language usage through picture books, songs, nursery rhymes, fingerplays, and a limited amount of educational television. • Models adult forms and functions of language. • Models ways of asking questions, encourages questions, and provides age-appropriate responses. • Models, encourages, and provides frequent opportunities for child to use language to report on past and present experiences, explain events, pretend, and project into the thoughts, feelings and experiences of others.	Speaks clearly and for a variety of purposes, using expanded sentences most of the time. Listens to and understands others.	Public Libraries Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers

PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE 5; OUTCOMES AND SOURCES OF ACCOUNTABILITY

I **Experience**	II **Indicators**	III **Outcome: The Child**	IV **In Addition to the Family, Who is Accountable?**
9. Positive guidance techniques are used to help the child develop self-discipline.	*PARENT/CARETAKER* • Is patient and gentle in dealing with infant behavior. • Establishes a reasonable number of necessary limits, appropriate to the age of child. Clearly communicates them, their reasons and the consequences of violating them to the child. Holds child to them. • Disciplines child by rewarding expected behavior, reminding child of limits, re-directing the child, or directing him/her to non-punitive consequences. • Models ways (s)he expects child to behave. • When limits are violated, renders timely corrections in a calm, quiet manner and involves child in problem solving. • Refrains from using any form of physical, emotional, or verbal abuse as punishment. • Ensures that guidance techniques used at home and in child care settings are consistent.	Demonstrates self-control appropriate to his or her age.	Depts. of Human Resources-Protective Services Division Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers
10. Is encouraged to do things on his or her own and provided time and opportunities to do so, while being protected from harm.	*PARENT/CARETAKER* • Allows child to have choices and make decisions and follows through on choices and decisions child makes. • Helps child acquire self-help skills related to dressing, personal hygiene, and care of personal property. • Provides opportunities for, and expects child to help with chores commensurate with his or her age and ability. • Encourages and allows child to pursue activities and interests on his or her own, while being available for assistance and conversation. • Encourages and allows child to take risks in order to find out what (s)he can do. • Refrains from punishing or criticizing child for accidents, forgetfulness, or taking too long. • Models and talks about the value of effort, persistence, and initiative. Encourages child to demonstrate such dispositions and praises him or her for doing so. • Teaches child socially acceptable ways for protecting his or her property rights and right to play without interference from others.	Has a sense of personal efficacy; can play (alone or with others), and perform age-appropriate tasks independently.	Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers
11. Learns apropriate social behavior by observing, modelling, and interacting with adults and peers.	*CHILD* • Has frequent opportunities to play with other children around his or her age. *PARENT/CARETAKER* • Models acceptable standards of social interaction including consideration, helpfulness, kindness, cooperation, sharing, friendliness, and concern for others. • Provides reasons for appropriate social behavior that focus on the feelings and reaction of others. • Helps child learn how to use language to negotiate social conflicts. • Deals with child's awareness of differences by helping him or her learn about similarities among people. Refrains from making negative or stereotypical remarks about people based on their race, culture, gender, or physical abilities/appearance. • Expects child to behave in socially acceptable ways such as sharing, taking turns, and waiting his or her turn. Praises child when (s)he does and corrects him or her when (s)he doesn't. • Limits child's exposure to violence and aggression in the media. • Uses expressions of courtesy and helps child learn to use them.	Interacts with others, most of the time, in socially acceptable ways.	Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers

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PROFILE OF FUNDAMENTAL EXPERIENCES NEEDED THROUGH AGE 5; OUTCOMES AND SOURCES OF ACCOUNTABILITY

I	II	III	IV
Experience	**Indicators**	**Outcome: The Child**	**In Addition to the Family, Who Is Accountable?**
12. Is immersed in an environment in which learning about reading and writing is a playful and interesting part of everyday life with adults and siblings.	*PARENT/CARETAKER* • Has access to books and magazines for children and other print materials. • Provides opportunities for child to tell and re-tell familiar stories. • Encourages and provides time for child to handle books and read on his or her own. • Provides time, tools, models, and encouragement for drawing, scribbling, and creating print independently. Enthusiastically accepts child's initial writing efforts with all their "mistakes". Does not require child to form letters correctly. *LITERATE ADULT OR SIBLING* • Reads to child everyday using a wide variety of literature including poetry, ABC books, and picture books, both fiction and non-fiction. While reading, asks questions and answers child's questions about the pictures and story. Involves child in re-reading books. • Points out and talks about print on signs, packages, and other everyday objects in the home and community. • Models literacy by reading and writing in sight of child and inviting him or her to help; for example, help write shopping lists, make greeting cards and labels, read the mail, and shop for groceries. • Provides opportunities for child to play alphabet games. • Helps child learn how to form letters correctly, and/or to write his or her name when, and if, (s)he expresses an interest.	Has some information about what reading and writing are for and how people read and write.	Public Libraries Preschool Providers-Public and Nonpublic Head Start Family Day Care Providers

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APPENDIX B

First Grade Benchmarks for Third Grade Outcomes in Personal-Social Development, Reading, Writing/Language Usage, Mathematics, Science, The Fine Arts, and Physical Education

PERSONAL-SOCIAL DEVELOPMENT
First Grade Benchmarks

OUTCOME: Functions appropriately and effectively in the school environment.

Personal	*Social*
BEHAVES IN WAYS THAT FOSTER HER OR HIS SUCCESS AS AN INDIVIDUAL AND LEARNER.	BEHAVES IN WAYS THAT PROMOTE HER OR HIS SUCCESSFUL INTERACTIONS WITH OTHERS.
BENCHMARK PERFORMANCES	
• Expresses pride in her or his gender, family, race, and culture. • Expresses pride in her or his strengths, efforts, and accomplishments. • Knows how to solve problems (at an age-appropriate level) and solves problems with which (s)he is confronted in school. • Makes personal choices and provides reasons for them. • Knows how to plan, carry through, and reflect on her or his learning and uses the "Plan-Do-Review" process to engage in self-initiated learning. • Demonstrates effort and task persistence (at an age-appropriate level). Is willing to try, and usually perseveres, to complete a task. • Knows that errors, messiness, a playful attitude, and invention/creativity are important to learning. • Usually demonstrates self-control. • Usually carries out daily routines with a minimum of adult assistance. • Asks peers or adults for assistance when needed. • Usually follows directions.	• Expresses positive views toward others, including their physical appearance and (dis)abilities, gender, family, race, and culture. • Usually listens to and considers the ideas, points of view, and feelings of others; expresses positive views toward others' strengths, efforts, and accomplishments. • Usually interacts with peers in a kind, helpful, and cooperative manner. • Uses words to solve interpersonal problems. • To the extent possible, uses words and/or deeds to help make restitution for her or his inappropriate social behavior.
• Knows and usually follows rules for personal safety and the care of self, others, and materials, and gives reasons for them.	

READING/WRITING/LANGUAGE USAGE OUTCOMES

First Grade Benchmarks

OUTCOME: Demonstrates a positive attitude towards listening, speaking, reading, and writing and confidence in communicating her/his ideas orally or in print.

Listening	*Speaking*	*Reading*	*Writing*
SUB-OUTCOME			
DEMONSTRATES A POSITIVE ATTITUDE TOWARDS LISTENING AND VALUES THE SIGNIFICANCE OF LISTENING.	DEMONSTRATES A POSITIVE ATTITUDE TOWARDS SPEAKING.	DEMONSTRATES A POSITIVE ATTITUDE TOWARDS READING.	DEVELOPS A POSITIVE ATTITUDE TOWARDS WRITING.
BENCHMARK PERFORMANCES			
• Distinguishes and responds to sounds in the environment. • Listens to engage in conversation with peers. • Listens to ideas, information, and/or points of view offered by peers. • Attends to oral messages, including directions, that are interesting or important to her/him. • Expects someone to listen attentively to her/him and value her/his ideas.	• Talks one-on-one and in familiar groups. • Talks to satisfy personal needs; to give instructions; obtain objects, materials, or help; interact with others; and imagine, predict, or project. • Volunteers information about self, family, experiences, observations, and points of view. • Initiates and sustains conversation with peers and adults. • Role plays; tells stories. • Asks questions. • Expects adults to extend her or his verbalizations and answer her or his questions. • Shows satisfaction/ pleasure during or after speaking and being understood.	• Chooses reading as a free-time activity. • Participates in shared reading of familiar text. • Talks about pictures and print (s)he has read. • Spontaneously looks at and reads a wide variety of print materials for pleasure, information, to complete a task, and/or to learn about practices that protect him or her from harm. • Spontaneously looks at and/or reads a wide variety of literary genre, including content-related books. • Listens to stories, poetry, prose, and a broad variety of language and music. • Shows enthusiasm and curiosity toward books and/or other forms of print, and reading.	• Chooses writing as a free-time activity. • Enjoys sharing her/his writing with peers and adults. • Enjoys approximating the behaviors of authors. • Enjoys writing and illustrating text for her/his own purposes. • Spontaneously experiments with inventive and conventional spelling.

READING/WRITING/LANGUAGE USAGE, (Cont'd.)

OUTCOME: Listens and speaks, and reads and writes a variety of texts, for a variety of purposes.

Listening	*Speaking*
LISTENS FOR A VARIETY OF PURPOSES.	SPEAKS FOR A VARIETY OF PERSONAL, SOCIAL, AND FORMAL PURPOSES.
BENCHMARK PERFORMANCES	
• Listens in order to respond to environmental sounds. • Listens and responds to the requests and questions of others. • Listens to gain information. • Listens in order to maintain relationships with others. • Listens for enjoyment and appreciation of literature. • Listens to develop an awareness of similarities and differences among people. • Listens to solve problems. • Listens to enhance imagination. • Constructs, examines, and extends meaning and questions others after listening.	• Uses mature speech patterns. • Uses expressions, gestures, and body language when speaking. • Expresses personal needs, choices, plans, experiences, ideas, feelings, and points of view. • Talks in order to describe, compare, sequence, analyze, infer, predict, and draw conclusions. • Talks in order to provide information. • Asks questions to gain information, clarify her or his thinking, and understand others. • Uses oral language to initiate and sustain friendships and work cooperatively with others. • Uses oral language for fun and cultural expression by reciting, chanting, telling original stories, and singing. • Persuades others to bring about an action or change. • Talks in order to solve problems. • Talks to express imagination, create dialogue, and tell stories. • Participates in group discussions.

READING/WRITING/LANGUAGE USAGE, (Cont'd.)

OUTCOME: Listens to, reads, and discusses a variety of texts for a variety of purposes.

Reading
READS A VARIETY OF TEXTS FOR MEANING.
BENCHMARK PERFORMANCES
• Knows that her or his own and others' knowledge, ideas, messages, and experiences can be written down and read as narratives or stories. • Reads and responds to rebuses, signs, labels, and functional print in her or his environment. • Listens to and reads factual text to gain information about a topic. • Listens to high quality picture books, then uses the pictures as clues for re-reading or re-telling and discussing the story. • Listens to, reads, and re-reads predictable, pattern, group-authored, or big books. • Reads simple books independently for a purpose. • Extends her or his sense of story by talking about various parts including, the beginning, middle, and end. • Interprets pictures, and reads to increase her or his understanding of the social, cultural, and physical worlds. • Begins to associate and use different texts/print materials for their intended purposes.

Reading

CONSTRUCTS, EXTENDS, AND EXAMINES MEANING WHEN READING FOR *LITERARY EXPERIENCE* BY DEVELOPING A GLOBAL UNDERSTANDING, DEVELOPING INTERPRETATION, MAKING A PERSONAL RESPONSE, AND TAKING A CRITICAL STANCE.

BENCHMARK PERFORMANCES

Global Understanding	Developing Interpretation	Personal Response	Critical Stance
• Identifies the main character or problem in a story. • Tells what a picture, story, poem, or song is about. • Re-tells a story, poem, or nursery rhyme in sequence. • Identifies the lesson or moral of a story.	• Relates illustration to the text. • Describes characters. • Describes story setting and time. • Predicts outcomes and future events. • Identifies the cause(s) or effect(s) of an event. • Relates cause and effect. • Reads with expression and intonation. • Dramatizes stories.	• Relates characters, events, and ideas in text to personal experiences. • Extends story content through self-selected experiences in social studies, science, math, the fine arts, health and safety, and physical education.	• Infers author's purpose. • Identifies moods such as humorous, sad, happy. • Identifies language patterns in text. • Compares/contrasts text to previously heard text. • Evaluates what (s)he has read in terms of a specified criterion.

CONSTRUCTS, EXTENDS, AND EXAMINES MEANING WHEN READING *TO BE INFORMED* BY DEVELOPING A GLOBAL UNDERSTANDING, DEVELOPING INTERPRETATION, MAKING A PERSONAL RESPONSE, AND TAKING A CRITICAL STANCE.

BENCHMARK PERFORMANCES

Global Understanding	Developing Interpretation	Personal Response	Critical Stance
• Identifies the topic or main point of text, including environmental print. • Provide details from the text that support the topic.	• Identifies the relationship among ideas in text, i.e., compares, contrasts, identifies cause and effect. • Makes inferences based on text information. • Uses text to draw conclusions. • Distinguishes between fact and fiction.	• Relates information in the text to personal experiences and background knowledge. • Identifies information that is new to her or him.	• Infers author's purpose.

CONSTRUCTS, EXTENDS, AND EXAMINES MEANING WHEN READING *TO PERFORM A TASK* BY DEVELOPING A GLOBAL UNDERSTANDING, DEVELOPING INTERPRETATION, MAKING A PERSONAL RESPONSE, AND TAKING A CRITICAL STANCE.

BENCHMARK PERFORMANCES

Global Understanding	Developing Interpretation	Personal Response	Critical Stance
• Tells how to use information relayed through directions. • Tells direction in correct sequence in own words. • Identifies who may use the information.	• Tells the end result of using the information. • Uses information in the text to respond to pertinent questions.	• Follows written directions for classroom activities, independent projects and to play games. • Identifies ways/situations in which information can be used. • Tells how the information relates to what (s)he already knows.	• Explains how directions did (or did not) help him or her perform a task and why.

READING/WRITING/LANGUAGE USAGE, (Cont'd.)

OUTCOME: Uses multiple writing experiences to express personal ideas, inform, and persuade across content areas.

Writing		
SUB-OUTCOME		
WRITES TO EXPRESS PERSONAL IDEAS BY USING A VARIETY OF STYLES FOR A VARIETY OF AUDIENCES AND PURPOSES.	WRITES TO INFORM BY USING A VARIETY OF STYLES FOR A VARIETY OF AUDIENCES AND PURPOSES.	WRITES TO PERSUADE BY USING A VARIETY OF STYLES FOR A VARIETY OF AUDIENCES AND PURPOSES.
BENCHMARK PERFORMANCES		
Leading to or Following Concrete Experience	***Leading to or Following Concrete Experience***	***Leading to or Following Concrete Experience***
• Communicates her or his ideas, experiences, and feelings through the visual arts. • Dictates individual narrative that expresses her or his experiences, fantasies, ideas, and feelings and observes the narrative being written down. • Contributes ideas to small group writing activities in which the following text is developed: *lists* *stories* *letters* *accounts of personal experiences* *phrases for pictures* *dialogue* *poetry or chants, and* *words for songs.* • Using invented and conventional spelling, composes her or his own: *lists* *stories* *letters* *accounts of personal experiences* *phrases for pictures* *dialogue* *poetry or chants, and* *words for songs* • Writes to perform daily routines. • Publishes books. • Keeps a journal of school/home experiences.	• Communicates her or his knowledge of, and ideas and understanding about, the physical/social worlds: - *through the visual arts, including models and diagrams* - *by dictating text for signs, labels, pictures, and reports* - *by contributing ideas to small group writing activities in which the following text is developed* *content area reports* *recipes* *directions* *signs/labels* *non-fiction books* *narratives about self and family* - *by using invented and conventional spelling, composes her/his own:* *content area reports* *recipes* *directions* *signs/labels* *non-fiction books* *narratives about self and family.* • Publishes non-fiction books. • Records her or his observations and findings. • Writes name on own products. • Completes forms with personal data about self and family.	• Draws and/or dictates text to express her or his point of view on a topic of personal importance or interest. • Using invented and conventional spelling, composes text that expresses her or his point of view on a topic of personal importance or interest.

READING/WRITING/LANGUAGE USAGE, (Cont'd.)

OUTCOME: Uses processes that promote effective written communication.

Writing

USES THE WRITING PROCESS WHEN WRITING TO EXPRESS PERSONAL IDEAS, INFORM, AND PERSUADE.

BENCHMARK PERFORMANCES

- Experiments with writing to communicate meaning (Learning centers and writing workshop).
- Generates ideas for small group writing projects (Pre-writing).
- Communicates her or his ideas, feelings, knowledge, and experiences visually, and in writing using invented and conventional spelling. Illustrates text. (First drafts, only, are always acceptable.) (Drafting)
- If (s)he so chooses, revises her or his text. (Revision by adding text is acceptable.)
- Identifies those pieces of writing that are important to her/him by sharing them with various audiences or publishing them (Publication/Celebration).

OUTCOME: Uses prior knowledge and strategic behaviors in constructing meaning from and communicating meaning through text.

Reading

DEMONSTRATES AN AWARENESS OF STRATEGIC BEHAVIORS AND KNOWLEDGE ABOUT READING.

BENCHMARK PERFORMANCES

- Has expanded knowledge of what and why people read.
- Develops print awareness including where print begins and ends on a page, left-to-right/top-to-bottom directionality, and the difference between words, letters, and sentences.
- Develops book awareness including holding a book right side up, finding the title, and turning pages front to back.
- Uses strategic behaviors to construct meaning from text before, during, and after reading:

  Prior to being read to, associates the title, topic, illustrations, or vocabulary of text with what (s)he already knows, uses various parts of a book to predict the content, and sets a purpose for reading.
  During reading, listens for details, constructs visual images of text events, and asks questions.
  After reading, interacts with others in response to text and re-reads to show understanding of content.

- Begins to construct a word recognition system.

  uses context to predict words
  recognizes and applies consonant "s" with meaning clues
  recognizes and applies consonant sounds with meaning clues (beginning-end-middle)
  recognizes and applies digraphs with meaning clues
  recognizes vowels
  applies long and short vowels sounds with meaning clues, and
  recognizes and applies predictable vowel patterns.

- Begins to use all the cueing systems that support fluency in reading including pictures, patterns, semantics, phonetics, and syntax.
- Begins to self-correct when reading.
- Asks for clarification when meaning is unclear.
- Reads simple text and patterned text with accuracy.

READING/WRITING/LANGUAGE USAGE, (Cont'd.)

OUTCOME: Uses prior knowledge and strategic behaviors in constructing meaning from and communicating meaning through text.

Writing	
USES METACOGNITIVE STRATEGIES TO ASSESS PERSONAL PROGRESS IN WRITING.	USES STANDARD WRITTEN ENGLISH APPROPRIATE FOR GRADE LEVEL.
BENCHMARK PERFORMANCES	
• Reviews samples of her or his writing collected over time and talks about the changes.	• Recognizes letters of the alphabet and their sounds. • Uses conventional letter formation and spacing between words when writing. • Spells words by approximating the sounds of letters. • Uses invented and conventional spellings when writing. • Uses capitalization for the beginning of sentences, proper names, dates, and addresses. • Uses a period, question mark, exclamation point, and quotation marks with some accuracy when writing.

MATHEMATICS OUTCOMES
First Grade Benchmarks

(Problems should be presented in real-life situations and provide for the use of manipulatives.)

OUTCOME: ***Has a positive attitude toward mathematics.***

BENCHMARK PERFORMANCES

- Chooses math-related experiences during classroom periods allocated for child-initiated learning and projects.
- Talks about ways math can be used and uses for her/his personal benefit.
- Demonstrates interest and enthusiasm during math-related activities.

OUTCOME: ***Working alone and with others, constructs and can explain her/his thinking about mathematical concepts using concrete materials, diagrams, and a problem-solving format/real-life context.***

BENCHMARK PERFORMANCES

Estimation	*Geometry and Spatial Sense*	*Measurement*	*Statistics and Probability*
• Uses estimation in working with quantity and measurement	• Sorts and matches manipulatives by 1-2 attributes. • Performs spatial visualization tasks such as combining figures to make a new shape, identifying a figure after it has been removed from view or rotated, and following oral directions to draw a shape.	• Knows that objects can be measured. • Compares objects by size, length, weight, volume, and temperature. • Uses standard and non-standard units to estimate and measure length and distance.	• Contributes to the organization of data on graphs and charts. • Describes, interprets, and discerns relationships among data on graphs and charts.
Fractions and Decimals	***Patterns and Relationships***	***Concepts of Whole Number Operations***	***Number Sense and Numeration***
• Subdivides a "whole" (object) into equal parts and compares the parts. • Recognizes a penny, nickel, and dime.	• Using concrete objects, identifies, describes copies, extends, and creates color, shape, size, and number using patterns. • Relates the concepts of "before" and "after" to personal experiences school and at home. • Helps create and talks about her or his daily schedule at home or in school.	• Manipulating objects, demonstrates real-life addition and subtraction problems.	• Counts, orders, and compares numbers to 25 and represents them in different ways.

OUTCOME: ***Uses mathematical concepts to solve problems across content areas related to her/his everyday world.***

BENCHMARK PERFORMANCES

- Uses real-life situations to formulate and describe mathematical problems.
- Recognizes that more than one strategy may be used to solve a mathematical problem.
- Solves a real-life problem and links the solution to the problem's context.
- Explains her/his answers and solution processes.

SCIENCE OUTCOMES - First Grade Benchmarks

CONCEPTS OF SCIENCE	NATURE OF SCIENCE	HABITS OF MIND	ATTITUDES	PROCESSES OF SCIENCE	APPLICATIONS OF SCIENCE
Outcome. Demonstrates acquisition and integration of major concepts and unifying themes from the life, physical, and earth/space sciences.	Outcome. Demonstrates the ability to interpret and explain information generated by the exploration of scientific phenomena.	Outcome. Demonstrates ways of thinking and acting inherent in the practice of science.	Outcome. Demonstrates positive attitudes toward science and its relevance to the individual, society, and the environment and confidence in the ability to practice science.	Outcome. Demonstrates the ability to employ the language, instruments, methods, and materials of science for collecting, organizing, interpreting, and communicating information.	Outcome. Demonstrates the ability to apply science in solving problems and making personal decisions about issues affecting the individual, society, and the environment.
BENCHMARK PERFORMANCES					
The life science program focuses on the characteristics of living things and their environment. The physical science program focuses on the properties of the physical world with which children interact. The earth/space science program focuses on local features of the earth, water, air, and sky.	• Knows that science describes, explains and predicts. • Knows that science is based on evidence. • Knows that scientific ideas and knowledge are often represented through diagrams and models.	• Uses her or his curiosity to initiate scientific inquiries *proposes ways of finding out* *asks questions* *makes good guesses or draws inferences about answers using prior knowledge and/or existing clues.* • Knows and feels that (s)he can question science statements made by others, including adults. • Relates scientific ideas to the evidence that supports them. • Gives consideration to others' views about science-related ideas or processes, even if those views seem unlikely or illogical or do not conform to popular thinking. • Finds answers and solves problems in cooperation with peers. • Reflects on and evaluates her or his knowledge and skills related to science. • Represents science-related ideas and processes through simple models or diagrams.	• Chooses to engage in science activities during independent work periods. • Chooses to look at or read science books and other science-related print materials and pictures. • Spontaneously examines science-related objects, materials, and displays. • Initiates talk about science phenomena observed, read, or heard about.	• Gathers evidence by conducting investigations *listens to or observes, and explores phenomena firsthand* *measures using non-standard units.* • Clarifies and modifies her/his own thinking by organizing and interpreting data describes events and their outcomes *sorts, classifies, and/or orders data* *compares and contrasts data* *explains cause and effect* *records data on charts and graphs* *builds/draws simple models or diagrams.* • Communicates her or his understanding of concepts, processes, or findings *through oral explanations and descriptions* *by drawing pictures* *by keeping written records, and* *by making displays or displaying collections.*	• Uses science knowledge, processes, and materials to solve problems related to her or his everyday life. • Uses scientific knowledge to make and justify decisions about how (s)he would act or react in particular situations. • Uses science knowledge and skills to role play/dramatize careers and occupations in science.

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LIFE SCIENCES OUTCOMES
First Grade Benchmarks

CONCEPTS OF SCIENCE	NATURE OF SCIENCE	HABITS OF MIND	ATTITUDES
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE LIFE SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO INTERPRET AND EXPLAIN INFORMATION GENERATED BY THEIR EXPLORATION OF SCIENTIFIC PHENOMENA.	OUTCOME. DEMONSTRATES WAYS OF THINKING AND ACTING INHERENT IN THE PRACTICE OF SCIENCE.	OUTCOME. DEMONSTRATES POSITIVE ATTITUDES TOWARD SCIENCE AND ITS RELEVANCE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT AND CONFIDENCE IN THE ABILITY TO PRACTICE SCIENCE.
BENCHMARK PERFORMANCES			
The life science program focuses on the characteristics of living things and their environment. ***Major Concepts:*** • Things in the environment have particular characteristics which enable them to be classified as living, non-living, or dead. • Living things have basic needs. • Living things are classified as plants or animals. • Living things are similar, but unique. • Living things have (anatomical) parts that serve particular purposes and create a whole. • Living things change and grow over time.	• Knows that the life sciences describe, explain and predict. • Knows that the life sciences are based on evidence. • Knows that life science ideas and processes can be represented through diagrams and models.	• Uses her or his curiosity to initiate life science inquiries *proposes ways of finding out* *asks questions* *guesses or draws inferences about answers using prior knowledge and/or existing clues.* • Asks questions about life science phenomena observed, read, or heard about. • Knows and feels that (s)he can question life science statements made by others, including adults. • Relates life science ideas to the evidence that supports them. • Gives consideration to others' views about life science ideas or processes, even if those views seem unlikely or illogical or do not conform to popular thinking. • Finds answers and solves problems in cooperation with peers. • Reflects on and evaluates her or his knowledge and skills related to the life sciences. • Represents life science ideas and processes through simple models or diagrams.	• Chooses to engage in life science activities during independent work periods. • Chooses to look at or read life science books and other life science-related print materials and pictures. • Spontaneously examines life science objects, materials, and displays in the classroom. • Initiates talk about life science phenomena observed, read, or heard about.

LIFE SCIENCES OUTCOMES, (Cont'd.)

CONCEPTS OF SCIENCE	PROCESSES OF SCIENCE	APPLICATIONS OF SCIENCE
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE LIFE SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO EMPLOY THE LANGUAGE, INSTRUMENTS, METHODS, AND MATERIALS OF SCIENCE FOR COLLECTING, ORGANIZING, INTERPRETING, AND COMMUNICATING INFORMATION.	OUTCOME. DEMONSTRATES THE ABILITY TO APPLY SCIENCE IN SOLVING PROBLEMS AND MAKING PERSONAL DECISIONS ABOUT ISSUES AFFECTING THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.
BENCHMARK PERFORMANCES		
The life science program focuses on the characteristics of living things and their environment. ***Major Concepts:*** • Things in the environment have particular characteristics which enable them to be classified as living, non-living, or dead. • Living things have basic needs. • Living things are classified as plants or animals. • Living things are similar, but unique. • Living things have (anatomical) parts that serve particular purposes and create a whole. • Living things change and grow over time.	• Gathers evidence about the life sciences by conducting investigations *listens to or observes, and explores phenomena firsthand* *measures using non-standard units.* • Clarifies and modifies her/his own thinking about the life sciences by organizing and interpreting data *describes events and their outcomes* *sorts, classifies, and/or orders data* *compares and contrasts data* *explains cause and effect* *records data on charts and graphs* *builds/draws simple models or diagrams that describe what happened.* • Communicates her or his understanding of life science concepts, processes, or findings *through oral explanations and descriptions* *by drawing pictures* *by keeping written records, and* *by making displays or displaying collections.*	• Uses life science knowledge, processes, and materials to solve problems related to her or his everyday life. • Uses knowledge of the life sciences to make and justify decisions about how (s)he would act or react in particular situations. • Uses life science knowledge and skills to role play/dramatize careers and occupations in the life sciences.

PHYSICAL SCIENCE OUTCOMES
First Grade Benchmarks

CONCEPTS OF SCIENCE	NATURE OF SCIENCE	HABITS OF MIND	ATTITUDES
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE PHYSICAL SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO INTERPRET AND EXPLAIN INFORMATION GENERATED BY THEIR EXPLORATION OF SCIENTIFIC PHENOMENA.	OUTCOME. DEMONSTRATES WAYS OF THINKING AND ACTING INHERENT IN THE PRACTICE OF SCIENCE.	OUTCOME. DEMONSTRATES POSITIVE ATTITUDES TOWARD SCIENCE AND ITS RELEVANCE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT AND CONFIDENCE IN THE ABILITY TO PRACTICE SCIENCE.
BENCHMARK PERFORMANCES			
The physical science program focuses on the properties of the physical world with which children interact. ***Major Concepts:*** ***Matter*** • Liquids and solids have different physical properties. • The properties of liquids and solids can be discerned through the senses. • The physical properties of a solid or liquid determine how it is used. • Some solids and liquids have properties that make them harmful to children. ***Force*** • Force is defined as a push or pull. • The way objects are pushed or pulled determines the speed at which they move and the distance traveled. • Distance and speed can be measured. ***Sound/Energy*** • Sound is caused by the vibration of objects. • Sounds vary and change in pitch, intensity, tempo, and beat. • Sounds in the environment can be described by their source.	• Knows that the physical sciences describe, explain and predict. • Knows and feels (s)he can question physical science statements made by others, including adults. • Knows that physical science ideas and processes can be represented through diagrams and models.	• Uses her or his curiosity to initiate physical science inquiries *proposes ways of finding out* *asks questions* *guesses or draws inferences about answers using prior knowledge and/or existing clues.* • Asks questions about physical science phenomena observed, read, or heard about. • Knows and feels that (s)he can question physical science statements made by others, including adults. • Relates physical science ideas to the evidence that supports them. • Gives consideration to others' views about physical science ideas or processes, even if those views seem unlikely or illogical or do not conform to popular thinking. • Finds answers and solves problems in cooperation with peers. • Reflects on and evaluates her or his knowledge and skills related to the physical sciences. • Represents physical science ideas and processes through simple models or diagrams.	• Chooses to engage in physical science activities during independent work periods. • Chooses to look at or read physical science books and other physical science-related print materials and pictures. • Spontaneously examines physical science objects, materials, and displays in the classroom. • Initiates talk about physical science phenomena observed, read, or heard about.

PHYSICAL SCIENCE OUTCOMES, (Cont'd.)

CONCEPTS OF SCIENCE	PROCESSES OF SCIENCE	APPLICATIONS OF SCIENCE
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE LIFE SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO EMPLOY THE LANGUAGE, INSTRUMENTS, METHODS, AND MATERIALS OF SCIENCE FOR COLLECTING, ORGANIZING, INTERPRETING, AND COMMUNICATING INFORMATION.	OUTCOME. DEMONSTRATES THE ABILITY TO APPLY SCIENCE IN SOLVING PROBLEMS AND MAKING PERSONAL DECISIONS ABOUT ISSUES AFFECTING THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.
BENCHMARK PERFORMANCES		
The physical science program focuses on the properties of the physical world with which children interact. ***Major Concepts:*** ***Matter*** • Liquids and solids have different physical properties. • The properties of liquids and solids can be discerned through the senses. • The physical properties of a solid or liquid determine how it is used. • Some solids and liquids have properties that make them harmful to children. ***Force*** • Force is defined as a push or pull. • The way objects are pushed or pulled determines the speed at which they move and the distance traveled. • Distance and speed can be measured. ***Sound/Energy*** • Sound is caused by the vibration of objects. • Sounds vary and change in pitch, intensity, tempo, and beat. • Sounds in the environment can be described by their source.	• Gathers evidence about the physical sciences by conducting investigations *listens to or observes, and explores phenomena firsthand* *measures using non-standard units.* • Clarifies and modifies her/his own thinking about the physical sciences by organizing and interpreting data *describes events and their outcomes* *sorts, classifies, and/or orders data* *compares and contrasts data* *explains cause and effect* *records data on charts and graphs* *builds/draws simple models or diagrams that describe what happened.* • Communicates her or his understanding of physical science concepts, processes, or findings *through oral explanations and descriptions* *by drawing pictures* *by keeping written records, and* *by making displays or displaying collections.*	• Uses physical science knowledge, processes, and materials to solve problems related to her or his everyday life. • Uses physical science knowledge to make and justify decisions about how (s)he would act or react in particular situations. • Uses physical science knowledge and skills to role play/dramatize careers and occupations in the physical sciences.

EARTH/SPACE SCIENCE OUTCOMES - First Grade Benchmarks

CONCEPTS OF SCIENCE	NATURE OF SCIENCE	HABITS OF MIND	ATTITUDES
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE EARTH/SPACE SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO INTERPRET AND EXPLAIN INFORMATION GENERATED BY THEIR EXPLORATION OF SCIENTIFIC PHENOMENA.	OUTCOME. DEMONSTRATES WAYS OF THINKING AND ACTING INHERENT IN THE PRACTICE OF SCIENCE.	OUTCOME. DEMONSTRATES POSITIVE ATTITUDES TOWARD SCIENCE AND ITS RELEVANCE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT AND CONFIDENCE IN THE ABILITY TO PRACTICE SCIENCE.
BENCHMARK PERFORMANCES			
The earth/space science program focuses on the characteristics of the earth, water, air, and sky. ***Major Concepts:*** *Weather and Seasons* • The weather can be described, tracked, recorded, and compared over time. • Changes in the weather, producing changes in the environment, are reflected in the seasons. • The weather influences daily life. *Ecology and Pollution* • The immediate environment can be classified and described in terms of its natural features. • Natural features in the environment influence how people live, work, and play. • Man-made pollution has an adverse impact that affects how people can live, work, and play in the environment.	• Knows that the earth/space sciences describe, explain and predict. • Knows that earth/space sciences are based on evidence. • Knows that earth/space science ideas and processes can be represented through diagrams and models.	• Uses her or his curiosity to initiate earth/space science inquiries *proposes ways of finding out* *asks questions* *guesses or draws inferences about answers using prior knowledge and/or existing clues.* • Asks questions about earth/space science phenomena observed, read, or heard about. • Knows and feels that (s)he can questions earth/space science statements made by others, including adults. • Relates earth/space science ideas to the evidence that supports them. • Gives consideration to others' views about earth/space science ideas or processes, even if those views seem unlikely or illogical or do not conform to popular thinking. • Finds answers and solves problems in cooperation with peers. • Reflects on and evaluates her or his knowledge and skills related to the earth/space sciences. • Represents earth/space science ideas and processes through simple models or diagrams.	• Chooses to engage in earth/space science activities during independent work periods. • Chooses to look at or read earth/space science books and other earth/space science-related print materials and pictures. • Spontaneously examines earth/space science objects, materials, and displays in the classroom. • Initiates talk about earth/space science phenomena observed, read, or heard about.

EARTH/SPACE SCIENCE OUTCOMES, (Cont'd.)

CONCEPTS OF SCIENCE	PROCESSES OF SCIENCE	APPLICATIONS OF SCIENCE
OUTCOME. DEMONSTRATES ACQUISITION AND INTEGRATION OF MAJOR CONCEPTS AND UNIFYING THEMES FROM THE EARTH/SPACE SCIENCES.	OUTCOME. DEMONSTRATES THE ABILITY TO EMPLOY THE LANGUAGE, INSTRUMENTS, METHODS, AND MATERIALS OF SCIENCE FOR COLLECTING, ORGANIZING, INTERPRETING, AND COMMUNICATING INFORMATION.	OUTCOME. DEMONSTRATES THE ABILITY TO APPLY SCIENCE IN SOLVING PROBLEMS AND MAKING PERSONAL DECISIONS ABOUT ISSUES AFFECTING THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.
BENCHMARK PERFORMANCES		
The earth/space science program focuses on the characteristics of the earth, water, air, and sky. ***Major Concepts:*** *Weather and Seasons* • The weather can be described, tracked, recorded, and compared over time. • Changes in the weather, producing changes in the environment, are reflected in the seasons. • The weather influences daily life. *Ecology and Pollution* • The immediate environment can be classified and described in terms of its natural features. • Natural features in the environment influence how people live, work, and play. • Man-made pollution has an adverse impact that affects how people can live, work, and play in the environment.	• Gathers evidence about earth and space by conducting investigations *listens to or observes, and explores phenomena firsthand* *measures using non-standard units.* • Clarifies and modifies her/his own thinking about earth and space by organizing and interpreting data *describes events and their outcomes* *sorts, classifies, and/or orders data* *compares and contrasts data* *explains cause and effect* *records data on charts and graphs* *builds/draws simple models or diagrams that describe what happened.* • Communicates her or his understanding of earth/space science concepts, processes, or findings *through oral explanations and descriptions* *by drawing pictures* *by keeping written records, and* *by making displays or displaying collections.*	• Uses earth/space science knowledge, processes, and materials to solve problems related to her or his everyday life. • Uses earth/space science knowledge of the to make and justify decisions about how (s)he would act or react in particular situations. • Uses earth/space knowledge and skills to role play/dramatize careers and occupations in the earth/space sciences. • Uses earth/space knowledge and skills to role play/dramatize careers and occupations in earth/space science.

FINE ARTS OUTCOMES
First Grade Benchmarks

PERFORMANCE/PRODUCTION			
ACQUIRES AND USES RUDIMENTARY SKILLS, TOOLS, MATERIALS, TECHNIQUES, AND ORGANIZING STRUCTURES TO PERFORM AND PRODUCE CREATIVELY IN THE FINE ARTS.			
BENCHMARK PERFORMANCES			
Art	**Dance**	**Music**	**Theater**
• Experiments with art elements including color, line, form, pattern, and texture. • Experiments with a wide variety of art tools and materials to create works of art that incorporate basic art elements. • Identifies and gives reasons for safety rules related to the use of various materials and tools. • Uses elements of art, in combination, to create compositions that express her or his ideas or feelings about real or imagined people, places, things, and events.	• Experiments with elements of dance including time (rhythm), force, shape, space and direction, and pattern. • Uses fundamental movements and elements of dance, in combination, to express her or his ideas or feelings about real or imagined people, places, things, or events. • Creates a simple dance. • Participates in ethnic and folk dances. • Exhibits appropriate audience behavior when observing a dance performance.	• Listens to classical, contemporary, ethnic, folk, and avant-garde music, and jazz in which music elements including pitch, tempo, beat, intensity, mood, melody, and melodic direction are clearly distinguishable. • Uses objects, instruments, and body parts to demonstrate music elements. • Names and describes musical instruments. • Creates a simple melody, rhythm or song. • Exhibits appropriate audience behavior when observing a musical performance.	• Imitates people animals, and objects in the environment; engages in dramatic play and role-playing. • Understands theatrical concepts including those related to the performances of actors, e.g., language and actions, and those related to production, e.g., props, costumes make-up, scenery, and sound effects. • In collaboration with peers, produces, rehearses, and performs a simple theatrical event. • Recreates a story or event using improvisation, storytelling, dramatization, puppets, and mime. • Exhibits appropriate audience behavior when observing a theatrical performance.

FINE ARTS OUTCOMES, (Cont'd.)

AESTHETICS			
DESCRIBES AND MAKES A PERSONAL RESPONSE TO THE FINE ARTS.			
BENCHMARK PERFORMANCES			
Art	**Dance**	**Music**	**Theater**
• Describes pictures, great works of art, art completed by self and peers, and the environment. • Relates works of art to personal experiences; responds artistically to the environment. • Tells how (s)he feels about various places and/or objects in the environment or various works of art and why. • Acquires information about art, artists, and art museums by reading books, hearing stories, viewing audio-visual materials, conducting science experiments using various art tools and materials, talking with artists, and taking field trips to art museums.	• Uses dance vocabulary to describe the movement of people, animals, and objects in the environment. • Discusses and demonstrates ways people express their feelings about experiences, music, and the environment through dance. • Acquires information about the world of dance and dancers by reading books, viewing audio-visual materials, talking with dancers, and taking field trips.	• Uses music terminology to identify, describe and tell how (s)he feels about sounds heard in music and the environment. • Responds to music through movement and art. • Acquires information about music, composers, and musicians by reading books, viewing audio-visual materials, conducting music-related science experiments, talking with musicians, and taking field trips.	• Dramatizes a story, nursery rhyme, or event. • Discusses events observed on television and in the movies from the perspective of real life vs. acting and real vs. imaginary. • Responds to personal and peer performances in a positive, constructive manner. • Acquires an interest in theater by observing theatrical productions.

FINE ARTS OUTCOMES, (Cont'd.)

HISTORICAL/CULTURAL			
ACQUIRES INFORMATION ABOUT THE FINE ARTS IN VARIOUS PERIODS AND CULTURES.			
BENCHMARK PERFORMANCES			
Art	**Dance**	**Music**	**Theater**
• Examines and experiments with some of the techniques and forms used by artists in various times and cultures. • Examines and experiments with the relationship between forms of art and the availability of tools and materials in the environment. • Explores, identifies, and role plays various careers in art.	• Examines and discusses the different reasons why people dance. • Performs simple dances from a variety of periods and cultures. • Explores, identifies, and role plays various careers in dance.	• Sings a wide variety of American songs and songs from other times and other places. • Listens to and tells how (s)he feels about a musical selection and why. • Explores, identifies, and role plays various careers in music.	• Dramatizes literature from various times and cultures. • Explores, identifies, and role plays various careers in theater.

FINE ARTS OUTCOMES, (Cont'd.)

CRITICISM

NOTICES, DESCRIBES, AND TALKS ABOUT THE AESTHETIC CHARACTERISTICS OF VARIOUS WORKS OF ART, INCLUDING HER OR HIS OWN, AND THE ENVIRONMENT.

BENCHMARK PERFORMANCES

Art	Dance	Music	Theater
• Describes the characteristics of objects in the environment and works of art that (s)he likes. • Describes the aesthetic elements in personal works of art and tells why (s)he decided upon those elements. • Describes others' art work and scenes from the environment in terms of their aesthetic elements and tells how they make him or her feel. • Compares two works of art with the same theme in terms of the similarities and differences of their aesthetic elements; tells how the elements in each affects her or his feeling about them. • Classifies a series of art works or scenes from the environment in multiple ways, each time providing a rationale for the classification. *(Aesthetic elements include color, form, content, materials, mood, and technique.)*	• Explains how (s)he feels about her or his dance performance and why. • After observing or performing a dance, thinks about elements other than movement that could convey mood or feelings. Explains what the identified elements could contribute to the mood or feeling of the dance. • In cooperation with peers, generates a list of criteria that describe a performance they like. After viewing a performance, discusses it in terms of the criteria.	• Explains how (s)he feels about her or his musical performance and why. • Talks about the variety of ways music is included in everyday life. • Talks about the diverse ways people from many cultures enjoy creating and performing music. • In cooperation with peers, generates a list of criteria that describe music they like. After listening to a musical selection, discusses it in terms of the criteria.	• Identifies the feelings of characters in a story and tells why they felt that way. • In cooperation with peers, generates a list of criteria that describe a "good" performance. After viewing a performance, discusses it in terms of the criteria.

PHYSICAL EDUCATION OUTCOMES

First Grade Benchmarks

PSYCHOMOTOR		
OUTCOME. MOVES EFFECTIVELY, EFFICIENTLY, AND CREATIVELY BY INTEGRATING MOVEMENT INTO SKILL DEVELOPMENT.	OUTCOME. EXHIBITS COMPETENCE IN A VARIETY OF LOCOMOTOR, NON-LOCOMOTOR, AND MANIPULATIVE SKILLS PERFORMED INDIVIDUALLY AND IN GROUPS.	OUTCOME. DEMONSTRATES AN APPROPRIATE LEVEL OF PHYSICAL FITNESS CONSISTENT WITH HER OR HIS INDIVIDUAL POTENTIAL.
BENCHMARK PERFORMANCES		
As demonstrated through self-testing, rhythmic activities, and loosely structured games and relays: • Moves in ways that show variation in timing (fast/slow, gradual/sudden, erratic/ sustained), • Moves in ways that show variation in flow (smooth/jerky, free/restricted), • Moves on different paths (backward/forward, diagonal, left/right, straight/curvy), • Moves body parts in unison, sequence, and opposition, • Stations her or his body in different positions in relation to objects and others, • Combines movement to perform a task, play a game, or dance alone or with a friend. ***Notes*:** *Self-testing is self-improvement through individualized effort and self-determined pacing.* *Rhythmic activities include clapping games, singing rhythms, rope jumping, jingles, aerobics, and pantomime.*	• Spontaneously, in response to verbal cues, and with or without musical accompaniment, executes locomotor skills (gradually increasing distance): hopping, galloping, walking, leaping, running, standing broad jump, climbing • Jumps rope consecutive times with rope swinging back and forth and overhead. • Kicks, rolls, throws, tosses, catches a ball, and dribbles it with hands or with feet. • Uses a variety of writing instruments. • Assembles puzzles having with at least 30 pieces. • Performs log, egg, pencil, and forward rolls with proficiency. • Walks forwards and backwards on a low balance beam. • Hangs by knees. • Spontaneously, in response to verbal cues, and with or without musical accompaniment, executes stability movements: bend, pivot, stretch, sway, twist, swing, turn, kneel, hang	• Engages in daily, active, and vigorous outdoor play. • Completes an obstacle course that requires a combination of running, walking, climbing, striking, lifting, and swinging.

PHYSICAL EDUCATION OUTCOMES, (Cont'd.)

COGNITIVE		
OUTCOME. DISPLAYS A KNOWLEDGE OF MOTOR SKILLS, RULES, AND STRATEGIES THAT SUPPORTS SAFE AND EFFECTIVE PERFORMANCE IN PHYSICAL ACTIVITIES.	OUTCOME. DESIGNS PERSONAL FITNESS PROGRAMS BASED ON FITNESS PRINCIPLES AND A RECOGNITION OF THE HEALTH BENEFITS OF PHYSICAL ACTIVITY.	OUTCOME. EMPLOYS CRITICAL AND CREATIVE THINKING SKILLS AND STRATEGIES.
BENCHMARK PERFORMANCES		
• Identifies the object of a simple game and tells how it is achieved. • Generates rules for playground safety, including the safe use of equipment, and provides reasons for each rule. • Identifies and talks about safety hazards and safe playing areas outside of school. • Identifies and talks about clothing that is *basic* to physical activity. • Identifies and talks about the care and use of equipment.	• Uses and responds to psychomotor and fitness-related vocabulary. • Explains the benefits of physical activity and outdoor play. • Develops a calisthenic routine and performs it with peers. • Develops a movement pattern and performs it with peers. • Uses a variety of quick and easy methods to keep a written record of calisthenic routines.	• Solves movement problems that are open-ended, have alternative solutions, and no "one right way". • Identifies specific ways that a simple game can be modified and plays the game in modified form. • In cooperation with peers, designs, helps set up, and completes a simple obstacle course.

PHYSICAL EDUCATION OUTCOMES, (Cont'd.)

AFFECTIVE		
OUTCOME. DISPLAYS ENJOYMENT AND A POSITIVE SELF-CONCEPT THROUGH OPPORTUNITIES TO PARTICIPATE SUCCESSFULLY IN SPORT, FITNESS, AND CREATIVE MOVEMENT EXPERIENCES.	OUTCOME. SHOWS AN APPRECIATION OF INDIVIDUAL DIFFERENCES AND THE BENEFICIAL RELATIONSHIPS THAT CAN BE ESTABLISHED AND ENHANCED THROUGH PHYSICAL ACTIVITY EXPERIENCES.	OUTCOME. DEMONSTRATES PERSONAL AUTONOMY, RESPONSIBILITY, AND HONESTY, AND WHILE WORKING RESPECTIVELY AND COOPERATIVELY WITH OTHERS.
BENCHMARK PERFORMANCES		
• Engages in physical activities with peers for fun. • Is willing to try, and usually perseveres, to perform a challenging physical activity. • Volunteers to demonstrate psychomotor skills. • Expresses pride in her or his physical efforts, capabilities, and accomplishments by talking about and/or demonstrating what (s)he can do.	• Demonstrates respect for the equipment and property of others. • Takes turns and shares equipment. • Tries to teach a friend a psychomotor skill, activity, or game. • Plays and works cooperatively with classmates who are less, or more physically skilled or abled than him or herself. • Participates and/or shows an interest in physical activities, games, and dances from other times and places.	• Is willing to listen to and follow brief directions in order to play a game or perform a psychomotor activity effectively and safely. • Demonstrates age-appropriate acceptable behavior in physical activities. • Provides assistance to friends and other peers who request help. • Accepts that everyone should have a turn in group games and acts accordingly.

APPENDIX C

Members of the Maryland Commission on the Early Learning Years Sub-Committees

Maryland Commission on the Early Learning Years
Subcommittee Meetings

Subcommittee	*Meeting Dates*			*Keynote Speaker(s)*
Program Organization	7/10	7/31	10/17	Dr. Sue Bredekamp, Director Naltonal Academy of Early Childhood Programs, National Association for the Education of Young Children Dr. Thomas Shultz, Staff Director National Association of State Boards of Education
Curriculum	6/28	7/26		Dr. Beatrice Sarlos, Professor of Philosophy and Curriculum Development Loyola College
Teaching and Learning	6/26	7/25	9/12	Patricia Fosarelli, M.D. Department of Pediatrics Johns Hopkins Hospital
Change, Renewal, and Program Improvement	7/11	7/24	9/14	Karen Spencer, Coordinator Office of Teacher Education Howard County Public Schools Dr. Bruce McKay, Staff Associate Project LEAD University of Maryland, College Park
Differentiated Programming	8/7	10/5		Dr. Nancy Karweit, Center for Social Organization of Schools Johns Hopkins University ***Panel:*** Dr. Ronald Schwartz, Coordinator Bilingual/ESOL Concentration University of Maryland, Baltimore County (UMBC) Dr. Lisa Delpit, Research Associate Institute of Urban Affairs Morgan State University Dr. Irene Hanson, Professor Elementary Education Towson State University
Home, School, and Community Partnerships	8/9	9/6		Anne Henderson, Education Policy Consultant National Committee for Citizens in Education
Assessment	9/25	10/16		Dr. JoAnne Nurss, Professor Early Childhood Education Georgia State University

PROGRAM ORGANIZATION SUBCOMMITTEE

Membership List

Dr. Nita Barbour, Chair
Department of Education
University of Maryland, Baltimore County

Ms. Dianne Madoni, Co-Chair
Administrator
Governor's Office for Children, Youth, and Families

Mr. Paul Bowman
Supervisor of Elementary Education
Harford County Public Schools

Dr. Sue Bredekamp, Director
National Academy of Early Childhood Programs
National Association for the Education of Young Children

Mr. Joseph Duell
Assistant Superintendent of Instructional Services
Kent County Public Schools

Ms. Stella Holmes
Supervisor Elementary Instruction
Baltimore County Public Schools

Mr. Peter Leyon, Principal
Thomson Estates Elementary School
Cecil County Public Schools

Ms. Betty McFarland
Prekindergarten Teacher
Frances Fuchs Elementary School
Prince George's County Public Schools

Ms. Sally Meyer
Early Childhood Supervisor
Anne Arundel County Public Schools

Ms. Elaine Ohler, Principal
Lexington Park Elementary School
St. Mary's County Public Schools

Dr. Beatrice Sarlos
Professor of Curriculum and Philosophy,
Department of Education
Loyola College

Dr. Thomas Schultz, Staff Director
National Association of State Boards of Education

Mr. Joseph Showell
Early Learning Specialist
Language Development and Early Learning Branch
Division of Instruction
Maryland State Department of Education

Dr. Barbara Wheeler
Executive Director of Elementary Education
Harford County Public Schools

Dr. Leonard Wheeler
Assistant Superintendent of Elementary Instruction
Baltimore City Public Schools

CURRICULUM SUBCOMMITTEE
Membership List

Dr. Frances Bond, Chair
Associate Dean of Education
Towson State University

Ms. Lois Braswell, CoChair
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Baltimore County Public Schools

Dr. Patricia Brooks, Principal
Heather Hills Elementary School
Prince George's County Public Schools

Ms. Donna Carney
Kindergarten Teacher
Thomson Estates Elementary School
Cecil County Public Schools

Dr. Robin Hobbs
Instructional Specialist
Baltimore City Public Schools

Ms. Lenore P. Huffer, Principal
Ocean City Elementary School
Worcester County Public Schools

Mr. Carroll Kehne
Art Specialist
Frederick County Public Schools

Ms. Jackie O'Neill
Teacher Specialist
Prince George's County Public Schools

Dr. Joetta Palkovitz-Brown
Director of Elementary Education
Washington County Public Schools

Dr. Joan Palmer
Assistant Superintendent
Curriculum and Instruction
Howard County Public Schools

Ms. Nancy Williams, Teacher
Myersville Elementary School
Frederick County Public Schools

Dr. Dennis Younger
Curriculum Director
Anne Arundel County Public Schools

Dr. Ocie Watson-Thompson
Coordinator for Early Childhood/Special Education (Undergraduate Level)
Bowie State College

TEACHING AND LEARNING SUBCOMMITTEE

Membership List

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Early Childhood Specialist
Frederick County Board of Education

Ms. Sara Duff
Specialist in Science and Health
Baltimore City Public Schools

Dr. Skip Fennell
Professor of Education
Western Maryland College

Mr. Donnelly Gregory
Office of Instruction and Program Development
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Dr. Wayne Harmon
Director of Elementary Education
Baltimore County Public Schools

Ms. Evelyn Jordan, Principal
Bainbridge Elementary School
Cecil County Public Schools

Ms. Sharon Lynch
Fourth Grade Teacher
Pinehurst Elementary School
Wicomico County Public Schools

Ms. Stephanie Maze-Hsu
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Ms. Jeanne Reardon
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Glenn Allen Elementary School
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Mr. Joseph Richter
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Ms. Pernetha Ross, Principal
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DIFFERENTIATED PROGRAMMING SUBCOMMITTEE
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Dr. Betty Butcher, Chair
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Maryland State Department of Education

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Baltimore City Public Schools

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Dr. Nancy Karweit
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CHANGE AND RENEWAL SUBCOMMITTEE
(Program Accountability And Improvement)
Membership List

Ms. Tru Ginsburg, Chair
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Somerset County Public Schools

Ms. Joanne Mulcahy
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Worcester County Public Schools

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Baltimore City Public Schools

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Cecil County Public Schools

Ms. Mary Bea Preston, Chief
School Improvement Section
School Improvement and Program Enrichment
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Maryland State Department of Education

Ms. Karen Schaefer, Principal
Martin Boulevard Elementary School
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Dr. Monica Ulhorn
Assistant Superintendent, Area III
Prince George's County Public Schools

Ms. Susan Webster, Assistant Principal
Bollman Bridge Elementary School
Howard County Public Schools

HOME, SCHOOL, COMMUNITY PARTNERSHIP SUBCOMMITTEE
Membership List

Ms. Brenda Schwaab, Chair
Early Childhood/Parenting
Maryland Congress of Parents
and Teachers, Inc.

Ms. Beverly Brown
Parent Involvement Coordinator
Montgomery County Public Schools

Ms. Jill Burkhart
Coordinator of Parent Volunteers
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Ms. Frances Chapman, Director
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Ms. Lola Crawford
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Language Development and Early Learning
Branch
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Maryland State Department of Education

Ms. Linda Zang
Program Specialist
Maryland State Department of Human
Resources

APPENDIX D

Members of the First Grade Outcomes Teacher Committees

*REGIONAL TASK FORCE MEETING
FIRST GRADE OUTCOMES
DORCHESTER COUNTY BOARD OF EDUCATION
APRIL 16, 1991

Carol Williamson, CHAIR	Dorchester County

Teacher Participants

Althea Tilghman	Caroline County
Wanda Lockerman	Cecil County
Linda Cox	Cecil County
Martha Thompson	Cecil County
Susie Price	Dorchester County
Jeannie Groves	Dorchester County
Gayle Gill	Kent County
Marcella Bradley	Queen Anne's County
Jean Cupani	Queen Anne's County
Sue Ellen Coughlin	Queen Anne's County
Kelly Hall	St. Mary's County
Kathryn Sloan	St. Mary's County
Jennifer Miller	St. Mary's County
Debbie Voshell	Talbot County
Tara Ward	Somerset County
Carol Ann Miller	Somerset County
Consdecella Dixon	Somerset County
Debra Elliott	Wicomico County
Juanita Briddell	Wicomico County
Patricia McGowan	Wicomico County
Linda Brown	Worcester County
Susan Bashore	Worcester County
Angela Sullivan	Worcester County

**Calvert and Charles Counties chose not to participate.*

*REGIONAL TASK FORCE MEETING
FIRST GRADE OUTCOMES
FREDERICK COUNTY BOARD OF EDUCATION
APRIL 18, 1991

Shari Ostrow Sher, CHAIR	Frederick County

Teacher Participants

Patricia Reeder	Allegany County
Carol Lloyd	Allegany County
Rose Montgomery	Allegany County
Phyllis P. Stafford	Anne Arundel County
Linda Gamble	Anne Arundel County
Barbara Rusko	Anne Arundel County
Anna Williams	Baltimore City
Roxanne Forr	Baltimore City
Rosalie Geise	Baltimore County
Lois Balser	Baltimore County
Althea Franklin	Baltimore County
Michele Amrhein	Carroll County
Alyce Logan	Carroll County
Cindy Compton	Carroll County
Sharon Gladhill	Frederick County
Barbara Saenger	Frederick County
Vivian Cade	Frederick County
Barbara Steeg	Harford County
Paulette wookfork	Harford County
Donna Streagle	Howard County
Karen Groner	Howard County
Ann Mintz	Howard County
Teresa O'Connor	Prince George's County
Barbara Banks	Prince George's County
Beth Wolfe	Prince George's County
Robin Davis	Washington County
Donna Weimer	Washington County
Stephanie Hannah	Washington County

**Garrett and Montgomery Counties chose not to participate. The final draft of the outcomes was reviewed by elementary and content area supervisors in Harford County.*

LAYING THE FOUNDATION FOR SCHOOL SUCCESS

Recommendations for Improving Early Learning Programs in Maryland

EXECUTIVE SUMMARY

The Maryland Commission on the Early Learning Years

Evelyn Blose Holman, Chair

Maryland State Department of Education
Bureau of Educational Development
Division of Instruction
200 West Baltimore Street
Baltimore, Maryland 21201

LAYING THE FOUNDATION FOR SCHOOL SUCCESS

RECOMMENDATIONS FOR IMPROVING EARLY LEARNING PROGRAMS IN MARYLAND

EXECUTIVE SUMMARY

Introduction

The fifteen-member Maryland Commission on the Early Learning Years, headed by Dr. Evelyn Blose Holman, was appointed in December 1989, by the State Superintendent to conduct a comprehensive study of the nature and development of children in the early learning years. The group was asked to examine the philosophy, policies, programs, methodologies, services, and organizational structures that provide direction for the education of students ages 4 through 9 and make appropriate recommendations for improved practices.

The commission met over a two-year period and investigated certain identified issues from a national, state, and local perspective.

The commission's report addresses four main areas: (1) bridging development and learning, (2) readiness experiences for children before school, (3) early learning programs for young children in school, and (4) home-school-community partnerships that promote young children's success in school. Each section of the report includes a perspective or review of the literature, recommendations grounded in the literature review, and an extensive list of references for additional reading.

1. *BRIDGING DEVELOPMENT AND LEARNING: MAKING CHILDREN'S EARLY EXPERIENCES RESPONSIVE TO THEIR CHARACTERISTICS*

The report examines children's intellectual, physical, social, and emotional development in light of four goals: a positive self-concept, social competence, mastery of basic skills, and development of intrinsic motivation. It looks at the developmental characteristics of young learners (what young children can do), sets a mission (to find out what can be done to foster the disposition to learn), and outlines a philosophy involving beliefs in dynamic growth, spontaneity of the child, holistic learning, cultural diversity, a classroom climate of inquiry, and the acceptance of responsibilities by the home, the community, business, and public and private agencies.

Goals for early learning are promulgated, calling for a prekindergarten through grade 4 program that fosters a positive self-concept; sustains children's curiosity; promotes acquisition of knowledge, skills, and processes; enables children to apply these to the real world; builds critical and creative thinking; and promotes children's skills in relationships.

2. *HOME, SCHOOL, AND COMMUNITY: HELPING CHILDREN GET READY FOR FIRST GRADE*

The report defines what "ready to learn" means, and it views kindergarten as "the final year of informal preparation for formal school."

Recommendations are made relating to holding families responsible for school readiness; expanding the scope of responsibilities for school readiness; and assessing school readiness. The recommendations call for specific action by the State Department of Education, involving its collaboration with the health community, families, parent-teacher groups, agencies that affect children and families, and other state departments.

Additional recommendations are addressed to the health and medical communities, to the child care/education community, and (in relation to assessing school readiness) to parents, local schools, and the Early Identification and Intervention Program (EIIP).

3. *EARLY LEARNING PROGRAMS: YOUNG CHILDREN IN SCHOOL*

This section of the report begins by making recommendations about program staff, their qualifications, and development. Action is called for by central office staff, local school systems, and the State Department of Education; field testing of recommendations is urged.

Looking at how education should be delivered in the early learning years, the report makes recommendations about structure and patterns and suggests group sizes and adult-child ratios for effective learning.

The report recommends ways the curriculum can help realize the program's mission. Recommendations tie into the Maryland State Department of Education content area outcomes, urging understanding and use of them. Specific recommendations are made in the areas of communication; citizenship and culture; mathematics, science, and technology; and personal growth.

Turning to methodology, the report makes recommendations to promote children's attainment of curricular outcomes by such means as implementing balanced and integrated content, allowing for independent and child-initiated activities, and avoiding a lock-step approach.

Differentiated programming -- "the deliberate and systematic process of modifying the way education is delivered" -- is called for, especially in relation to the view that levels of heterogeneity and diversity will increase in Maryland's schools during the late 1990's. Differentiated programming can address the issue of education equity, the report states, and recommendations are made concerning education of children who are behind, education for exceptional children, and education for children from diverse backgrounds.

The report calls for multifaceted and continuing student assessment that is sensitive to age, development, gender, language, cultural, racial, and socioeconomic differences among children. Other recommendations define limits on assessment and relate to how test data should be used, for example, in making placement decisions.

The report places the responsibility for implementing an appropriate and effective early learning program on each school, and it defines such a program.

The penultimate section of this area of the report deals with program accountability. It sets criteria for such accountability and makes recommendations for local school systems, the State Department of Education, and the Early Identification and Intervention Program (EIIP).

The last section in this area examines school-based program improvement and makes recommendations for a self-study process by schools as a guide for decision-making.

4. ***HOME, SCHOOL, AND COMMUNITY REVISITED: BUILDING FAMILY PARTNERSHIPS TO PROMOTE CHILDREN'S SCHOOL SUCCESS***

The report concludes that there is "unrefutable evidence" that family support for education results in higher student achievement. Thus, recommendations are made for the development of strategies by each local school and school system that will involve families and make use of their feedback.

Additional recommendations relate to the roles of the State Department of Education's Division of Library Services, the Chambers of Commerce, and the Home-School-Community Council and to the need for a course in family-school-community partnerships for future teachers.

Appendices

The report includes four appendicies. Appendix A is a profile of fundamental experiences needed through age five, including outcomes and sources of accountability. Appendix B is made up of first grade benchmarks for third grade outcomes in personal-social development; reading, writing/language usage; mathematics; science; the fine arts; and physical education. Appendix C lists members of the subcommittees of the Maryland Commission on the Early Learning Years. Appendix D lists members of the first grade outcomes teacher committees.

C:\WORD55\TERRIE\COMEXSUM